The Harveian Oration

ON

MODERN DEVELOPMENTS OF HARVEY'S WORK.

Delivered before the Royal College of Physicians of London on Oct. 18th,

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MR. PRESIDENT, FELLOWS, AND VISITORS,—This annual meeting in memory of Harvey is usually associated with feelings of pleasure and happiness, for it was intended by its immortal founder to commemorate the benefactors of the College and to encourage good fellowship amongst us. Such commemoration of those who have benefited the College in the past, although it necessarily recalls many who have passed away, is, notwithstanding, on ordinary occasions pleasant instead of painful, because the feeling of loss through their death is completely overpowered by the recollection of the good they have done in their lifetime. To-day the case is very different, for the first thought that must needs occur to everyone present here is that on this occasion last year our late President showed for the first time what seemed to be imperfect fulfilment of his duty to the College by being late in his attendance at the meeting. Perhaps nothing else could have shown more clearly his deep concern for the welfare of the College and his thorough devotion of every faculty of mind and body to its interests than the fact that no duty, no pleasure, and no press of occupation could tempt him to leave one iota of his work in the College undone. The only thing that did keep him back was the hand of Death, which, although at the last meeting he and we knew it not, was already laid upon him. Though his death was less happy than that of the great Harvey, inasmuch as he lingered on for days instead of hours after he was first struck down, yet their deaths were alike in this respect, that up to the time of the fatal attack each was in the full possession of his faculties, each was in the enjoyment of his life. Like Radcliffe and Mead, like Halford and Baillie, and like many other distinguished Fellows of this College, the greatness of Clark is to be estimated not by the published works which he has left behind, but by the influence he exerted on his contemporaries. For the very estimation in which his professional skill was held led to his whole time being taken up in giving advice, and prevented him from having the leisure to work out or record the results of the pathological and clinical observations which both his youthful publications and his later career showed him to be specially fitted to make. I might say very much more about him, but it has already been said much better than I could possibly do it by yourself, Mr. President, in your annual address and in the eloquent and heart-stirring words which you addressed to the College on the occasion of your taking the presidential chair rendered vacant by the death of Sir Andrew Clark. But while we are saddened to-day by the death of our late President, we hope to be gladdened by the presence amongst us again of one whom we all reverence, not only as a former President of this College, but as one of the greatest leaders of clinical medicine in this century, Sir William Jenner. Like Harvey, Sir William Jenner is honoured by his College, by his country, by his sovereign, and by the world at large. In times of trial and danger the lives of the Royal children were committed to the keeping of Harvey by his King, and to-day the care not only of her own life, but of that of her nearest and dearest, is committed to Sir William Jenner by his Sovereign, in the full and well-grounded assurance that in no other hands could they be more safe. The great clinician, Stokes, wished to have as his epitaph, "He fed fevers"; but Jenner has advanced much beyond Stokes, and by showing us how to feed the different kinds of fevers has saved thousands of valuable lives. To-day this College is acknowledging his right to rank with Sydenham, Heberden, Bright, and Garrod by bestowing upon him the Moxon medal for clinical research. In numbering Sir William Jenner among its medallists the College honours itself as well as him, and in acknowledging the great services he has rendered it is, on this occasion, acting as the mouthpiece of the medical profession, not only in this country, but in the world at large.

It was with the wish to keep green the memory of the benefactors of the College that this oration was instituted by Harvey, and not at all with the intention that it should be devoted to his own praise. But Harvey stands out so high above all others that it is only natural that in the numerous orations which have been yearly given before the College of Physicians the subject matter should have been, to a great extent, confined to a consideration of Harvey and his works. On looking over many of these orations I find that everything I could say about Harvey—his person, his circumstances, his character, and his works—has already been said so fully and eloquently that I could not add to it anything further, nor could I hope to express it even so well. I purpose, therefore, to consider to-day some of the modern developments of Harvey's work, more especially in relation to the treatment of diseases of the heart and circulation. There is, I think, a certain advantage in this also, inasmuch as one is apt, by considering Harvey's work only as he left it, to overlook the enormous extent to which it now influences our thoughts and actions, and thus to comprehend its value very imperfectly. As he himself says: "From a small seed springs a mighty tree; from the minute gemmule or apex of the acorn how wide does the gnarled oak at length extend his arms, how loftily does he lift his branches to the sky, how deeply do his roots strike down into the ground."[1]

How very minute is the gemmule from which has sprung everything that is definite in medical science, for this gemmule is no other than the idea which Harvey records in these simple words: "I began to think whether there might not be motion, as it were, in a circle." Out of this idea has grown all our knowledge of the processes of human life in health and disease, of the signs and symptoms which indicate disease, of the mode of action of the drugs and appliances which we use, and the proper means of employing them in the cure of disease. In the works that have come down to us we find that Harvey developed his idea physiologically in several directions. He discussed its application to the absorption and distribution of nourishment through the body, the mixing of blood from various parts, the maintenance and distribution of animal heat, and excretion through the kidneys. How far he developed it in the direction of pathology and therapeutics we do not know, as the results of his labours on these subjects have, unfortunately, been lost to us by the destruction of his manuscripts during the Civil War. We are proud to reckon Harvey as an Englishman by birth, but he is far too great to belong exclusively to any country; men of various nations, and scattered all over the face of the earth, acknowledge him as their teacher, and have played, or are playing, a part in developing his discovery in its various branches of physiology, pathology, pharmacology, semeiology, and therapeutics. Americans, Austrians, Danes, Dutchmen, Frenchmen, Germans, Italians, Norwegians, Russians, and Swedes have all shared in the work, and so numerous are they that it would be impossible for me to name them all. Stephen Hales, however, deserves special mention, for he was the first to measure the pressure of blood in the arteries, and the resistance offered to the circulation of the blood by the capillaries was investigated by Thomas Young, a Fellow of this College, who ranks with Harvey, Newton, and Darwin as one of the greatest scientific men that England has ever produced, and whose undulatory theory has been as fertile of results in physics as Harvey's idea of circulation has been in physiology and medicine.

Harvey's desire that those who had done good work should not be forgotten was founded upon his knowledge of mankind, and of the tendency there is to forget what has already been done by those who have gone before us. The opposite condition often prevails, and the past is glorified at the expense of the present. But sometimes the present is wrongly glorified at the expense of the past, and past work or past benefits are forgotten. Good examples of this are afforded by physiological views regarding the action of the vena cava and pulmonary veins, and the causation of the cardiac sounds. Harvey appears to have thought that the vena cava and pulmonary veins were simply dilated passively by the passage of blood into them; but the fact that they possess a power of independent pulsation was known to Haller,[2] and was brought prominently forward by Senac,[3] who regards the vena cava as the starting point of the whole circulation. He says: "The vena cava is therefore the first motor cause which dilates the cavities of the heart; it fills the auricles and extends their walls in every direction." These observations appear to have been almost forgotten until they were

[1] The Works of William Harvey: Sydenham Society's Edition, p. 320.
[2] Elemente der Physiologie, 1757, tome i., pp. 410 and 399.
[3] De la Structure du Cœur, livre iv., ch. iii., p. 24.

again made independently a few years ago,[4] and in one of the latest and most accurate physiological treatises which now exist the description of the cardiac cycle is nearly the same as that given by Senac. A complete beat of the whole heart, or cardiac cycle, may be observed to take place as follows: "The great veins, inferior and superior venæ cavæ, and pulmonary veins are seen, while full of blood, to contract in the neighbourhood of the heart; the contraction runs in a peristaltic wave toward the auricles, increasing in intensity as it goes."[5] The pulsation of these veins, however, cannot be a constant phenomenon or it would have been noticed by such a keen observer as Harvey. The sounds of the heart were discovered by Harvey, or at least were known to him, for he speaks of the sound caused in the œsophagus of the horse by drinking and says: "In the same way it is with each motion of the heart, when there is a delivery of blood from the veins to the arteries, that a pulse takes place and can be heard within the chest." This observation remained, as far as we know, without any further development until the time of Laennec, who introduced the practice of auscultation; but it was a Fellow of this College, Wollaston,[6] who first discovered that the muscles during contraction give out a sound, and although many observations were made regarding cardiac murmurs by Corrigan, Bouillaud, and Piorry it was chiefly by Fellows of this College — Clendinning, C. J. B. Williams, and Todd — that the question was finally settled, and the conclusions at which they arrived are those now accepted as correct[7]—viz., that the first or systolic sound is essentially caused by the sudden and forcible tightening of the muscular fibres of the ventricle when they contract, and that the second sound which accompanies the diastole of the ventricle depends solely on the reaction of the arterial columns of blood in the semilunar valves at the arterial orifices. Yet in recent discussions regarding the origin of cardiac sounds little mention has been made of the work of this committee, and indeed I first learned of the value of the work from a German source, Wagner's "Handwörterbuch der Physiologie."

The importance of these observations in the diagnosis of heart disease it would be hard to over-estimate. But diagnosis alone is not the aim of the physician, whose object must be to prevent, to cure, or to control disease. A knowledge of physiology may greatly help us to prevent disease, not only of the heart and vessels, but of every member of the body. The control and cure of disease may also be effected by diet and regimen, but it is undoubtedly in many cases greatly assisted by the use of drugs, and is sometimes impossible without them. Harvey[8] knew that drugs applied externally are absorbed and act in the body, so that colocynth thus applied will purge, and cantharides will excite the urine, but the action of drugs when injected into the blood appears to have been tried first by Christopher Wren, better known as the architect of St. Paul's Cathedral than as a pharmacologist. According to Bishop Sprat, "he was the first author of the noble anatomical experiment of injecting liquors into the veins of animals; an experiment now vulgarly known, but long since exhibited to the meetings at Oxford, and thence carried by some Germans, and published abroad. By this operation divers creatures were immediately purged, vomited, intoxicated, killed, or revived, according to the quality of the liquor injected. Hence arose many new experiments, and chiefly that of transfusing blood, which the Society has prosecuted in sundry instances, that will probably end in extraordinary success."[9] The method originated by Wren of injecting drugs into the circulation was skilfully utilised by Magendie for the purpose of localising the particular part of the body upon which the drugs exerted their action, and he thus conclusively proved that the symptoms produced by strychnine were due to its effect on the spinal cord. His experiments showed that the rate of absorption from various parts of the body varied enormously, and, through the teaching of Christison, led to the introduction into practice by Alexander Wood of that most useful aid to modern therapeutics, the hypodermic syringe. The first quantitative experiments on the effect of drugs upon the circulation were made, to the best of my knowledge, by James Blake in 1844, in the laboratory of University College, at the suggestion of the late Professor Sharpey, with the hæmodynamometer of Poiseuille, which had then been recently introduced. In speaking about the work of Blake and Sharpey, who are both dead, one requires to use the greatest care not to unduly detract from the merit of one by ascribing more to the other; but those who knew Professor Sharpey's enormous range of knowledge, his readiness to put it all at the disposal of others, and the influence he exerted upon all who came in contact with him, as well as his unselfishness in making no claim whatever to what was justly his due, will at once recognise how greatly Blake was indebted to Sharpey. More especially is this the case when we consider that, although the credit for the observations themselves belongs to Blake, yet after the impetus which Sharpey gave him had passed away he did very little more during the course of a long life. It seems all the more necessary to commemorate Sharpey on this occasion because he has left comparatively few writings behind him, and anyone who should judge by them alone of his influence upon physiological progress in this country would grievously under-estimate it. For Sharpey was above all a teacher, and his work was written not with pen and ink on paper or parchment, but was engraved upon the hearts and minds of his pupils and friends. Upon two of these especially has Sharpey's mantle fallen, and to Burdon Sanderson and Michael Foster we owe a revival of experimental physiology in this country, a revival of the method which Harvey not only used in making his great discovery, but also employed to demonstrate the truth of it to the rulers of this land. By their writings, lectures, original experiments, demonstrations, and by the pupils they have trained, Burdon Sanderson and Michael Foster under the auspices of Acland and Humphry have diffused amongst the medical men of this country a knowledge of physiology so extensive and exact as could only be found before their time amongst those who had made a special study of the subject. Yet more than to them, more than to anyone else since the time of Harvey, do we owe our present knowledge of the circulation to Carl Ludwig. He it is who first enabled the pressure of blood in the arteries to record its own variations automatically, so that alterations could be noticed and measured which were too rapid or too slight to be detected by the eye. To him, also, we owe the plan of artificial circulation by which the changes in the functions of the organs and in the vessels which supply them can be observed, quite apart from the heart, lungs, or from the nervous system. Like Sharpey, Ludwig is a great teacher, and like the great architects of the Middle Ages, who built the wonderful cathedrals which all admire and whose builder's name no man knows, Ludwig has been content to sink his own name in his anxiety for the progress of his work and in his desire to aid his pupils. The researches which have appeared under these pupils' names have been in many instances, I believe in most, not only suggested by Ludwig, but carried out experimentally with his own hands, and the paper which recorded the results finally written by himself. In the papers which have appeared under his pupils' names we find their obligations to the master recorded in such terms as "unter Mitwirkung." But no one except those who have worked with him can understand what such coöperation meant.

The graphic method introduced by Ludwig for the purpose of measuring the blood pressure was adapted by Volkmann to the registration of the pulse in man, and the same method has been modified and rendered more easily applicable at the bedside by Marey and Chaveau, to whom we chiefly owe our knowledge of the modification in the form of the apex beat and of the pulse curve. It is to Ludwig and his scholars, however, that we owe the greater part of our knowledge of the mechanism of the circulation and of the varying distribution of the blood in various parts of the body.

The effect of emotion upon the heart was carefully noted by Harvey, who says: "For ever affection of the mind which is attended with pain or pleasure, hope or fear, is the cause of an agitation whose influence extends to the heart."[10] Not only was Harvey acquainted with the fact that the beats of the heart vary much in strength and force, but he also knew that the circulation in various parts of the body may be very different at one and the same time. He

[4] Proc. Roy. Soc., 1876, No. 172.
[5] M Foster: Text-book of Physiology, sixth edition, part i., ch. iv., p. 231.
[6] Phil. Trans., 1810, p. 2.
[7] Report of Committee consisting of C. J. B. Williams, R. B. Todd, and John Clendinning, Brit. Ass. Rep. for 1836, p. 155.
[8] The Works of William Harvey: Sydenham Society's Edition, p. 72.
[9] The History of the Royal Society of London for the Improving of Natural Knowledge. By Tho. Spratt, D.D., late Lord Bishop of Rochester.
[10] The Works of William Harvey: Sydenham Society's Edition, p. 70.

says: "It is manifest that the blood in its course does not everywhere pass with the same celerity, neither with the same force, in all places and at all times, but that it varies greatly according to age, sex, temperament, habit of body, and other contingent circumstances, external as well as internal, natural or non-natural. For it does not course through intricate and obstructed passages with the same readiness that it does through straight, unimpeded, and pervious channels; neither does it run through close, hard, and crowded parts with the same velocity as through spongy, soft, and permeable tissues; neither does it flow and penetrate with such swiftness when the impulse of the heart is slow and weak as when this is forcible and frequent, in which case the blood is driven onwards with vigour and in large quantity." "And what indeed is more deserving of attention than the fact that in almost every affection, appetite, hope, or fear, our body suffers, the countenance changes, and the blood appears to course hither and thither. In anger the eyes are fiery and the pupils contracted; in modesty the cheeks are suffused with blushes; in fear, and under a sense of infamy and of shame, the face is pale, but the ears burn as if for the evil they heard or were to hear; in lust how quickly is the member distended with blood and erected." [11] Harvey's great contemporary, Milton, though so violently opposed to him in politics, would certainly not remain in ignorance of Harvey's work, and he has noted the changes in the colour of the face produced by emotions. In describing the behaviour of Satan on his journey from Hell to Paradise, he says:

> "Thus while he spoke, each passion dimm'd his face,
> Thrice changed with pale, ire, envy, and despair;
> Which marred his borrow'd visage." [12]

But although these facts were known to Harvey so long ago, it is only in comparatively recent years that the mechanism by which they are brought about has been investigated, and it is only within the last decade that physiologists have begun regularly to believe that the cardiac muscle has a power of rhythmic pulsation independent of its nerves, although Harvey had noted that when the heart was cut into small pieces the fragments would still continue to pulsate. We may fairly, indeed, compare the movements of the heart, as regarded by physiologists of the present day, to those of a horse which is capable of going independently, although its pace may be slowed or accelerated by the reins or spur of the rider. The power of the vagus to act as a rein to the heart and slow its movements or stop them altogether was first noted by Edward and Ernest Heinrich Weber, while the effect that it sometimes has of accelerating instead of slowing, like the effect of shaking the reins of the horse, was observed by Schiff, Moleschott, and Lister. The accelerating nerves of the heart were more thoroughly investigated by von Bezold, while the power of the vagus to weaken as well as slow the heart was observed by Gaskell. The position of the cardiac centre, which, like the rider, regulates the movements of the heart, was located in the medulla oblongata chiefly by Ludwig and his scholars. Like the heart, the vessels also are regulated in diameter by the nervous system in accordance with the wants of the body generally, and the effect upon the vaso-motor nerves, which, when cut, allow them to dilate, and, when stimulated, cause them to contract, was discovered by Bernard, Brown-Séquard, and by our countryman, Waller, while the power of other nerves to cause immediate dilatation was discovered by Bernard, Eckhardt, and Ludwig in the submaxillary glands, penis, and peripheral vessels respectively.

The heart, when cut out of the body, still continues to beat although removed completely from the influence of the central nervous system, and the vessels have a somewhat similar power of independent contractility. The alterations produced in the circulation generally and locally by the contractile power of the vessels and the changes produced in the vessels by the central nervous system, by peripheral stimulation of the nerves, or by variations in the quality of the blood, have formed the subject of a series of researches extending over many years, and though originated, and in many cases entirely conducted, by Ludwig, have appeared to a great extent under the names of his pupils. The starting point of these investigations was an examination of the changes in the blood as it flowed through the isolated organs, with a view to ascertaining in what manner the combustion by which the animal heat is maintained was effected in the body. While keeping up the circulation of blood through the vessels of muscles severed from the body, Ludwig and Sczelkow [13] observed variations in the flow which appeared to indicate contractile power in the vessels themselves. This research was carried on under Ludwig's direction by various of his scholars in succession—Alexander Schmidt, Dogiel, Sadler, myself, Hafiz, Lépine, A. Bosso, von Frey, and Gaskell. Their observations, as well as those of Cohnheim and Gunning, have shown that the muscular fibres of the arterioles, not only in the muscles, but throughout the body generally, have a power of independent and sometimes rhythmical contraction and relaxation. Their contractility is, however, controlled by the central nervous system in accordance with the wants of the body generally; for the amount of blood contained in the body is insufficient to fill the whole of the vascular system at once, and when the vessels are fully dilated, as they are after death, we find that nearly the whole of the blood of the body may be contained in the veins alone. It is, therefore, necessary that when one part of the body is receiving a larger supply of blood another should be receiving a smaller supply, and the functions of the vaso-motor centres have been well compared by Ludwig to the turncocks in a great city, who cut off the water-supply from one district at the same time that they turn it on to another. Thus it is that when the brain is active the feet may get cold; and Mosso has shown this in an exceedingly neat manner by placing a man on a large board delicately balanced at its centre, and demonstrating that whenever the man began to think the increased supply of blood to his brain caused the head to go down and the heels to rise up. A similar condition was indicated by Mayow, who gave a different explanation. He said that the vital spirits were not able to be in the same place at once, and therefore it happens that if a man eats a heavy meal he is apt to become drowsy because the vital spirits descend from the brain to the stomach in order to carry on digestion, and, on the other hand, if a man thinks vigorously after dinner the vital spirits have to leave the stomach to go to the brain, and consequently digestion is imperfectly performed. If we substitute the word "blood" for vital spirits we have an exact expression of present physiological ideas.

Ubi stimulus ibi afluxus was an old doctrine and expressed a great truth. Wherever the need for increased nourishment or increased supply of oxygen exists in the healthy body, thither does the blood flow in larger quantities than usual. If the glands are active, their blood-supply is greatly increased, as was shown by Bernard, and a similar occurrence takes place in the contracting muscle, as has been shown by Ludwig and his scholars. The vessels of the intestines and of the skin, with their numerous glands, have their calibre regulated by the vaso-motor nerves which proceed from the centre in the medulla oblongata. This centre acts most readily upon the vessels of the intestines and rather less readily on those of the skin. In consequence of this, when the centre is irritated, the vessels of the intestine contract and drive the blood through the skin, so that it is warmer than before, and it is only when the stimulation is very great that the vessels of both contract, so that the skin receives less blood than normal and becomes colder than before. But if the vessels of the skin and intestine are both contracted where does the blood go? This question was put by Ludwig and answered by the experiments which he made with Hafiz. It is evident that if the heart be stopped while the blood pressure is being measured in the artery of an animal the pressure will fall regularly and steadily, because the blood is flowing out all the time through the arterioles and capillaries into the veins. One would naturally expect that if the arterioles were contracted by irritation of the vaso-motor centres in the medulla the fall of blood pressure would either not take place at all or would be very much slower than before; but, on trying the experiment, Ludwig and Hafiz found, to their surprise, that the blood pressure fell almost as quickly as when the vaso-motor centre was left alone, and the vessels of the skin and intestine, therefore, remained uncontracted. In other words, the vessels which supply the muscles of the body and limbs are capable of such extension that when fully dilated they will allow the arterial blood to pour through them alone nearly as quickly as it usually does through the vessels of the skin, intestine, and muscles together. This observation, it seems to me, is one of the greatest importance, and has hardly received the attention it merits. It is obvious that contraction of the cutaneous vessels such as occurs upon exposure to cold will drive more blood through the muscles,

[11] Ibid., pp. 128, 129.
[12] Paradise Lost, by John Milton, book iv., p. 85.
[13] Henle und Pfeuffer's Zeitschrift, 1863, vol. xvii., p. 106, and vide p. 122.

and as oxidation goes on more rapidly in them the result will be increased production of heat.

The experiments I have just mentioned show that the vessels of the muscles are not controlled by the vaso-motor centre in the medulla oblongata in the same way as those of the intestine and skin. How far their vascular centres may be associated with those for voluntary movements which have been so admirably localised by Ferrier in the cerebral cortex remains to be made out. The circulation through the muscles is, indeed, a complex phenomenon, and it was shown by Ludwig and Sadler to depend upon at least two factors having an antagonistic action. When a muscle is thrown into action it mechanically compresses the bloodvessels within it and thus tends to lessen the circulation through it, but at the same time the stimulus which is sent down through the motor nerve and which calls it into action brings about a dilatation of the muscular walls and thus increases the circulation through the muscle. When the amount of blood is measured before, during, and after stimulation of its motor nerves it is sometimes found that the flow is diminished, at others that it is increased, the alteration depending upon the comparative effect of the mechanical compression of the vessels of the muscles just mentioned and upon the increase of their lumen by the dilatation of their walls. It invariably happens, however, that after the muscle has ceased to act the flow of blood through the muscle is increased. This increase is quite independent of any alteration in the general pressure of blood in the arteries, and it occurs when an artificial stream of blood, under constant pressure, is sent through the muscle. The dilatation in the muscular vessels, as indicated by the increased flow of blood and consequent change of colour in the frog's tongue, was observed by Lépine after stimulation of the peripheral ends of the hypoglossal and glosso-pharyngeal nerves, and the actual change in the vessels themselves was observed microscopically by von Frey and Gaskell. The dilatation of muscular vessels on irritation of peripheral nerves was thus brought into a line with the dilatation noticed in the vessels of the submaxillary gland by Bernard, and in the corpora cavernosa by Eckhardt. It is evident that alteration in the size of such a huge vascular tract as the muscular arteries must influence, to a great extent, the blood pressure in the arteries generally, and it is equally evident that the changes induced in the condition of the blood pressure by muscular action may be of two kinds—either a rise or a fall. If the arterioles are compressed by the muscles, so that the flow through them is impeded, the general blood pressure will rise. When this effect is more than counteracted by the dilatation of the arterioles themselves under nervous influence the general blood pressure will fall, for the blood will find an easy passage through the vessels from the arteries into the veins. We can thus see how readily a rise or fall in the general blood pressure may be induced by exercise of the muscles. If they contract suddenly or violently they will tend to compress the arterioles and raise the blood pressure, while quite easy contraction will have little effect in compressing the arterioles, and these, becoming dilated, will allow the blood pressure to fall.

But there is still another factor which may tend to increase the blood pressure during severe muscular exertion, and this is the fact that stimulation of the nerve fibres extending from the muscles to the central nervous system greatly accelerates the beats of the heart. In this respect stimulation of the muscular nerves differs from that of the cutaneous and visceral nerves, inasmuch as the latter tend rather to slow than to quicken the pulse. The peculiar effect of the muscular nerves upon the heart would, indeed, appear to be a provision of nature for the purpose of maintaining an exceedingly active circulation during the active calls upon nutrition which violent exertions entail. Muscular exercise, therefore, has a special tendency to raise the blood pressure in the arterial system and consequently to increase the resistance which the left ventricle has to overcome. Moreover, in the case of the intestinal vessels there is a special provision made for preventing their contraction from causing too great a rise of arterial pressure. This consists in the depressor nerve, which passes from the heart and tends to produce dilatation of the abdominal vessels, and thus prevent any undue pressure occurring within the heart from their excessive contraction. In the case of the muscles we have no such nerve. Its place seems to be taken by the dilating fibres which occur in the motor nerves. As I have already said, however, this effect of dilatation in the muscular vessels may be at first more than counteracted by mechanical compression at the commencement of exertion, and thus the blood pressure in the arteries and the resistance which it opposes to the contraction and emptying of the ventricle may be unduly increased.

As a general rule the distension of any hollow muscular organ is attended with great pain. How great is the suffering when obstruction of the bowel prevents evacuation of its contents, or when a calculus, in its passage down the gall-duct or ureter, forcibly distends their walls. One of the severest tortures of the Middle Ages was to distend the stomach with water, and the Emperor Tiberius could imagine no more awful punishment for those whom he hated than to make them drink wine and, at the same time, by means of a ligature, to prevent the distended bladder from emptying itself. The heart is no exception to this rule, and distension of its cavities brings on most acute physical suffering. Its inability to empty itself is a question of relative and not of absolute power, for a strong heart may be unable to work against enormously increased resistance in the peripheral arterioles, while the heart weakened by degeneration may be unable to empty itself in face of pressure little, if at all, above the normal. When the contractile power of the heart is not, as it is in health, considerably in excess of the resistance opposed to it in vessels, but is nearly equal to it, a slight increase in the resistance may greatly interfere with the power of the heart to empty itself, and bring on pain, varying in amount from slight uneasiness to the most intense agony in angina pectoris. This is, indeed, what we find, for a heart whose nutrition has been weakened by disease of the arteries and consequent imperfect supply of blood to the cardiac muscle is unable to meet any increased resistance if this should be offered to it, and pain is at once felt. In such cases, unless they be far advanced, we find, precisely as we might expect, that walking on the level usually causes no pain, but the attempt to ascend even a slight rise, by which the muscles are brought into more active exertion, brings on pain at once. Yet here, again, we find, as we should expect, that if the patient is able to continue walking the pain passes off and does not return. These phenomena would be inexplicable were it not for Ludwig's observations on circulation through the muscles, but in the light of these observations everything is made perfectly intelligible. Walking on the flat, by causing no violent exertion of the muscles, produces no mechanical constriction of the vessels and thus does not increase the blood pressure. The greater exertion of walking up a hill has this effect, but if the patient is able to continue his exertions the increased dilatation of the vessels—a consequence of muscular activity—allows the pressure again to fall and relieves the pain. As muscular exertion continues and the vessels of the muscles become dilated the flow of blood from the arteries into the veins will tend to become much more rapid than usual. The pressure in the arterial system will fall consequently, but that in the veins will become increased, and unless a corresponding dilatation occurs in the pulmonary circulation blood will tend to accumulate in the right side of the heart, the right ventricle will be unable to empty itself completely, shortness of breath will arise, and even death may occur. At first the right side of the heart is affected and the apex beat disappears from the normal place and is felt in the epigastrium, but the left ventricle also becomes dilated, though whether this is simply through nervous influence tending to make it act concordantly with the right or for some other reason it is at present impossible to say. Severe exertion, even for a few minutes, may produce this condition in healthy persons,[14] and when the exertion is over-continued it may lead to permanent mischief. More especially is this the case in young growing boys, and it is not merely foolish, it is wrong, to insist upon boys engaging in games or contests which demand a long-continued over-exertion of the heart, such as enforced races and paper chases extending over several miles. Intermittent exertion, either of a single muscle, or of a group of muscles, or of the whole body, appears to lead to better nutrition and increased strength and hypertrophy; but over-exertion, especially if it be continued, leads to impaired nutrition, weakness, and atrophy. If we watch the movements of young animals we find that they are often rapid, but fitful and irregular, and varied in character, instead of being steady, regular, and uniform. They are the movements of the butterfly, and not of the bee. The varied plays of childhood,

[14] Schott: Verhandlungen des IX. Congresses für Innere Medicin zu Wien, 1890.

the gambols of the lamb, and the frisking of the colt are all well adapted to increase the strength of the body without doing it any injury, but if the colt, instead of being allowed to frisk at its own free will, is put in harness or ridden in races the energy which ought to have gone to growth is used up by the work, its nutrition is affected, its powers diminished, and its life is shortened. The rules which have been arrived at by the breeders of horses ought to be carefully considered by the teachers of schools and by the medical advisers who superintend the pupils.

In youth and middle age every organ of the body is adapted for doing more work than it is usually called upon to do. Every organ can, as it is usually termed, make a spurt if required, but as old age comes on this capacity disappears, the tissues become less elastic, and the arteries become more rigid and less capable of dilating and allowing freer flow of blood to any part, whether it be the intestine, the skin, the brain, the muscles, or the heart itself. Mere rigidity of the arteries supplying the muscles of the heart will lessen the power of extra exertion, but if the vessels be not only rigid, but diminished in calibre, the muscles of the limbs and the heart itself will be unfit even for their ordinary work, and will tend to fail on the slightest over-exertion. This fact was noticed by Sir Benjamin Brodie, who, when speaking of patients with degenerating and contracted arteries, such as lead to senile gangrene, said: "Such patients walk a short distance very well, but when they attempt more than this the muscles seem to be unequal to the task, and they can walk no further. The muscles are not absolutely paralysed, but in a state approaching to it. The cause of all this is sufficiently obvious. The lower limbs require sometimes a larger and sometimes a smaller supply of blood. During exercise a larger supply is wanted on account of the increased action of the muscles; but the arteries being ossified or obliterated, and thus incapable of dilatation, the increased supply cannot be obtained. This state of things is not peculiar to the lower limbs. Wherever muscular structures exist the same cause will produce the same effect. Dr. Jenner first, and Dr. Parry of Bath afterwards, published observations which were supposed to prove that the disease which is usually called 'angina pectoris' depends on ossification of the coronary arteries. ..... When the coronary arteries are in this condition they may be capable of admitting a moderate supply of blood to the muscular structure of the heart; and as long as the patient makes no abnormal exertion the circulation goes on well enough; when, however, the heart is excited to increased action, whether it be during a fit of passion, or in running, or walking upstairs, or lifting weights, then the ossified arteries, being incapable of expanding so as to let in the additional quantity of blood which under these circumstances is required, its action stops and syncope ensues; and I say that this exactly corresponds to the sense of weakness and want of muscular power which exist in persons who have the arteries of the legs obstructed or ossified."[15] But the syncope and stoppage of the heart mentioned by Brodie are not the only consequences of impaired cardiac nutrition. The heart may be still able to carry on the circulation, but the patient may suffer intense pain in the process. The outside of the heart was found by Harvey to be insensible to light touches, but the inside of the heart appears to be much more sensitive either to touch or pressure. A knowledge of the mode of circulation of blood through the muscles enables us to understand not only the pathology of angina pectoris, but the *rationale* of various methods of treating patients suffering from angina pectoris or other forms of heart disease. In most cases our object is a two-fold one—to increase the power of the heart and to lessen the resistance it has to overcome. In some cases we require also to aid the elimination of water which has accumulated so as to give rise to œdema of the cellular tissues or dropsy of the serous cavities. In our endeavours to produce these beneficial changes in our patients we employ regimen, diet, and drugs, and it is evident that in cases where the condition of one patient's heart may be very different indeed from that in another, the regimen which may be useful to one may be fatal to the other. We have already seen that sudden and violent exertion may raise the blood pressure and so lead to intense cardiac pain or to stoppage of the heart and instant death, while more gentle exercises, by increasing the circulation through the muscles, may lessen the pressure and give relief to the heart.

[15] Lectures on Pathology and Surgery, by Sir Benjamin Brodie, London, 1846, p. 360.

The methods of increasing the muscular circulation may be roughly divided into three, according as the patient lies, stands, or walks: first, absolute rest in bed with massage;[16] secondly, graduated movements of the muscles of the limbs and body while the patient stands still; thirdly, graduated exercises in walking and climbing. The second of these methods has been specially worked out by the Brothers Schott of Nauheim, and the third is generally connected with the name of Oertel. It is obvious that in cases of heart disease where the failure is great and the patient is unable even to stand, much less to walk, where breathlessness is extreme and dropsy is beginning or has even advanced, the second and third methods of treatment are inapplicable. It is in such cases that the method of absolute rest in bed, not allowing the patient to rise for any purpose whatever, hardly allowing him to feed himself or turn himself in bed, proves advantageous. The appetite is usually small, the digestion imperfect, and flatulence troublesome, and here an absolute milk diet, like that usually employed in typhoid fever is often most serviceable, being easily taken and easily digested, while the milk sugar itself has a diuretic action and tends to reduce dropsy. But while simple rest prevents the risk of increased arterial tension and consequent opposition to the cardiac contractions which might arise from muscular exertion, such benefits as would accrue from muscular exertion and increased circulation would be lost were it not that they can be supplied artificially by massage. This plan of treatment, although it has only recently been revived, was known to Harvey, who narrates the case of a man who, in consequence of an injury, of an affront which he could not revenge, "was so overcome with hatred, spite, and passion that at last he fell into a strange disorder, suffering from extreme compression and pain in the heart and breast," "from which he only received some little relief when the whole of his chest was pummelled by a strong man, as the baker kneads dough."[17] This was a very rough form of massage, but the same kneading movements which he described have been elaborated into a complete system, more especially by Ling in Sweden, and made widely known in America and this country by Weir Mitchell and Playfair. One might naturally expect that kneading the muscles would increase the circulation through them in somewhat the same way as active exercise, but, to the best of my knowledge, no actual experiments existed to prove this, and I accordingly requested my friend and assistant, Dr. Tunnicliffe, to test the matter experimentally. The method employed was, in the main, the same as that devised by Ludwig and employed by Sadler and Gaskell under his direction. The results were that during the kneading of a muscle the amount of venous blood which issued from it was sometimes diminished and sometimes increased; that just after the kneading was over the flow was diminished, apparently due to accumulation of blood in the muscle, and again succeeded by a greatly increased flow exactly corresponding with that observed by Ludwig and his scholars. The clinical results are precisely what one would expect from increased circulation in the muscles, and cases apparently hopeless sometimes recover most wonderfully under this treatment. For patients who are stronger, so that confinement to bed is unnecessary, and who yet are unable to take walking exercise, Schott's treatment is most useful, and it may be used as an adjunct to the later stages of the treatment just described, or as a sequel to it. Here the patient is made to go through various exercises of the arms, legs, and trunk, with a certain amount of resistance, which is applied either by the patient himself setting in action the opposing muscles or by an attendant, who gently resists every movement made by the patient, but graduates his resistance so as not to cause the least hurry in breathing or the least oppression of the heart. Perhaps the easiest way of employing graduated resistance is by the ergostat of Gärtner, which is simply an adaptation of the labour cranks of prisons, where the number of turns of a wheel can be regulated in each minute and the resistance applied by a brake, and may be graduated to an ounce. The objection to it is the uniformity of movement and its wearisome monotony. Oertel's plan of gradually walking day by day up a steeper and steeper incline, and thus training the muscles of the heart, is well adapted for stronger persons, but when applied injudiciously may lead, just like hasty or excessive exertion, to serious or fatal results. In all these plans the essence of treatment is the derivation of blood

[16] Practitioner, vol. ii., p. 190.

[17] Harvey's Works, Sydenham Society's Edition, p. 128.

through a new channel, that of the muscular vessels; and the results in relieving cardiac distress and pain may be described in the same words which Harvey employs in reference to diseases of the circulation: "How speedily some of these diseases, that are even reputed incurable, are remedied and dispelled as if by enchantment."[18]

There is yet another consequence of the circulation to which Harvey has called attention, although only very briefly, which has now become of the utmost importance, and this is the admixture of blood from various parts of the body. After describing the intestinal veins Harvey says: "The blood returning by these veins and bringing the cruder juices along with it, on the one hand, from the stomach, where they are thin, watery, and not yet perfectly chylified, on the other, thick and more earthy, as derived from the fæces, but all pouring into this splenic branch, are duly tempered by the admixture of contraries."[19] Harvey's chemical expressions are crude, for chemistry as a science only began to exist about a century and a half after Harvey's death; yet the general idea which he expresses in the words which I have just quoted is wonderfully near the truth. The most important constituents of the blood are chloride of sodium and water. Chloride of sodium is a neutral salt, but during digestion both it and water are decomposed in the gastric glands and hydrochloric acid is poured into the stomach; while a corresponding amount of soda is returned into the blood and its alkalinity increases *pari passu* with the acidity of the stomach. Part of this alkali is excreted in the urine, so that the urine during digestion is often neutral or alkaline, and possibly some of it passes out through the liver with the bile of the pancreas and intestinal juice, where, again mixing with the chyle from the stomach, neutralisation takes place, so that neutral and comparatively inactive chloride of sodium is again formed from the union of active alkali and acid. But it is most probable that what occurs in the stomach occurs also in the other glands, and that it is not merely excess of alkali resulting from gastric digestion which is poured out by the liver, pancreas, and intestine, but that these glands also decompose salts, pour the alkali out through the ducts, and return the acid into the blood.

But we are now leaving the region of definite fact and passing into that of fancy, but the fancies are not entirely baseless, and may show in what direction we may search out and study the secrets of nature by way of experiment; for what is apparently certain in regard to the decomposition of chloride of sodium in the stomach, and probably in the case of neutral salts in the pancreas and intestine, is also probable in that important, though as yet very imperfectly known, class of bodies which are known as zymogens: just as we have in the stomach an inactive salt, so we have also an inactive pepsinogen, which, like the salt, is split up in the gastric glands and active pepsine is poured into the stomach. But is the pepsine the only active substance produced? Has no other body, resulting from decomposition of the pepsinogen, been poured into the blood while the pepsine passed into the stomach? Has the inactive pepsinogen not been split up into two bodies, active when apart, inactive when combined? May it not be fitly compared, as I have said elsewhere, to a cup or glass, harmless while whole but yielding sharp and even dangerous splinters when broken, although these may again be united into a harmless whole? This question at present we cannot answer, but in the pancreas there is an indication that something of the kind takes place, for Lépine has discovered that, while this gland pours into the intestine a ferment which converts starch into sugar, it pours through the lymphatics into the blood another ferment which destroys sugar. Whether a similar occurrence takes place in regard to its other ferments in the pancreas or in the glands of the intestine we do not know, nor do we yet know whether the same process goes on in the skin and whether the secretion of sweat, which is usually looked upon as its sole function, bears really no relationship to cutaneous activity which the secretion of bile bears to the functions of the liver. There are indications that such is the case, for when the skin is varnished not only does the temperature of the animal rapidly sink, but congestion occurs in internal organs and dropsy takes place in serous cavities, while in extensive burns of the skin rapid disintegration of the blood-corpuscles occurs. It is obvious that if this idea be at all correct a complete revolution will be required in the views we have been accustomed to entertain regarding the action of many medicines; in the case of purgatives and diaphoretics, for example, we have looked mainly at the secretions poured out after their administration, whereas it may be that the main part of the benefit that they produce is not by the substances liberated through the secretions they cause, but returned from the intestine and skin into the circulating blood. How important an effect the excessive admixture of the juices from one part of the animal body with the circulating blood might have was shown in the most striking way by Wooldridge. He found that the juice of the thyroid gland injected into the blood would cause it to coagulate almost instantaneously and kill the animal as quickly as a rifle bullet. What is powerful for harm is likewise powerful for good in these cases, and the administration of thyroid juice in cases of myxœdema is one of the most remarkable therapeutic discoveries of modern times. Since the introduction by Corvisart of pepsine as a remedy in dyspepsia digestive ferments have been largely employed to assist the stomach and intestine in the performance of their functions, but very little has been done until lately in the way of modifying tissue changes in the body by the introduction of ferments derived from solid organs. For ages back savages have eaten the raw hearts and other organs of the animals which they have killed or the enemies they have conquered, under the belief that they would thereby obtain increased vigour or courage, but the first definite attempt to cure a disease by supplying a ferment from a known glandular organ of the body was, I believe, made in Harvey's own hospital by the use of raw meat in diabetes.[20] It was not, however, until Brown-Séquard recommended the use of testicular extract that the attention of the profession became attracted to the use of extracts of solid organs. Since then extract of thyroid, extract of kidney, and extract of supra-renal capsule have been employed, but even yet they are only upon their trial, and the limits of their utility have not been definitely ascertained.

But yet another therapeutic method has been recently introduced which bids fair to be of the utmost importance—the treatment of disease by antitoxins. The discovery by Pasteur of the dependence of many diseases upon the presence of minute organisms may be ranked with that of Harvey, both in regard to the far-reaching benefits which it has conferred upon mankind and for the simplicity of its origin. "Why does a crystal of tartaric acid sometimes crystallise in one form and sometimes in another?" These minute organisms, far removed from man as they are in their structure and places in nature, appear in some respects to resemble him in the processes of their growth and nutrition. They seem, indeed, to have the power of splitting up inactive bodies into substances having a great physiolcgical or chemical activity. From grape sugar, which is comparatively inert, they produce carbonic acid and alcohol, both of which have a powerful physiological action. From inert albumen they produce albumoses having a most powerful toxic action, and to the poisonous properties of these substances attention was for awhile alone directed; but it would appear that at the same time that they produce poisons they also form antitodes, and when cultivated without the body and introduced into the living organism they give rise to the production of these antidotes in still greater quantity, and by the use of antitoxin tetanus and diphtheria appear to be deprived of much of their terrible power. The plan of protection from infective diseases which was first employed by Jenner in small-pox is now being extended to many other diseases, and the protective substances which are formed in the body and the mode of action are being carefully investigated. The introduction of either the pathogenic microbe or of toxic products appears to excite in the body a process of tissue change by which antitoxins are produced, and these may be employed either for the purpose of protection or cure. It was shown by Wooldridge that thyroid juice has a power of destroying anthrax poison, and it seems probable that increase of the circulation of certain organs will increase their tissue activity and thus influence the invasion or progress of disease. As I have already mentioned in the case of muscles, we are able to influence the circulation both by voluntary exertion and by passive massage in muscles, and we should expect that both of these measures would influence the constituents of the blood generally; and such, indeed, appears to be the case, for J. K. Mitchell[21] has found that after massage the number of blood-corpuscles in the circulation is very considerably increased.

[18] The Works of William Harvey: Sydenham Society's Edition, p. 161. [19] Ibid., p. 75.

[20] Brit. Med. Jour., Feb. 21st, 1874, p. 221 et seq.
[21] American Journal of the Medical Sciences, May, 1894.

Had time allowed it I had intended to discuss the modifications of the heart and vessels by the introduction of remedies into the circulation, the power of drugs to slow or strengthen, to quicken or weaken, the power of the heart to contract or relax the arterioles, to raise or lower the blood pressure, to relieve pain or to remove dropsy, but to do this would require time far exceeding that of a single lecture. Moreover, the methods and results were admirably expounded to the College by Dr. Leech in his Croonian Lecture, and I have therefore thought I should be better fulfilling the wish of Harvey that the orator of the year should exhort the Fellows and Members of the College to search out the secrets of nature by way of experiment by directing their attention to fields of research which have received at present little attention, but promise results of great practical value. Lastly, I have to exhort you to continue in mutual love and affection among yourselves, and it seems to me that the best way of doing this is to direct your attention to the examples of Harvey and of our late President, whose death we deplore to-day. They were beloved by their fellows while they lived, their loss was deplored when they died, and they have left behind them an example not only of goodness but of courage. Harvey, seated speechless in his chair, distributing rings and parting gifts to his friends while awaiting the approach of death; and Andrew Clark, steadfastly determining to continue at work and die in harness in spite of the hæmoptysis which seemed to threaten a speedy death, afford us noble examples which ought to encourage us to follow the directions of the venerable poet, Longfellow, who, taking the organ Harvey studied to symbolise such courage as Harvey and Clark showed, says:

> "Let us then be up and doing
> With a heart for any fate,
> Still achieving, still pursuing,
> Learn to labour and to wait."

The Hunterian Lecture

ON

SOME SUBJECTS OF PUBLIC AND PROFESSIONAL INTERESTS.

Delivered before the Hunterian Society on Oct. 10th, 1894,

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WHEN, Mr. President, you kindly invited me in the name of your Council to deliver one of the lectures recently founded by your Society, and intimated that some of the topics of the day would be an acceptable subject, my mind almost naturally reverted to a short address which I delivered on Feb. 8th, 1894, before the South-West London Medical Society[1] on some subjects of public and professional interest; and, as I have reason to believe that that imperfect communication proved to be of some assistance to my professional brethren, I propose on the present occasion to continue the same line of thought, and to lay before you, for your consideration, the conclusions to which I have been led upon many matters which seriously involve the progress and welfare of our profession in its public relations as well as in its own special interests. In carrying out this purpose it is probable that I may have to use expressions which will not be in the keynote of general laudation, and consequently it seems expedient to remember that our profession at the present time is well spoken of by leading men, and that our two most prominent, if not greatest, statesmen have recently made some remarkable observations upon its progress. Thus Mr. Gladstone has said "that the position of the medical profession in our generation, and in some generations previous, has been continually advancing and continually rising. It continually advances in knowledge, credit, and importance." "Men," said Lord Salisbury but the other day, "may, perhaps, have overrated the progress of nineteenth century research in opening the secrets of nature; but it is difficult to overrate the brilliant service it has rendered in ministering to the comforts and diminishing the sufferings of mankind."[2] These opinions are pleasant reading, emanating as they do from men of great intellect, wide knowledge, and careful observation. Let us accept them, therefore, with the pleasure such complimentary statements are calculated to excite, and do our best to demonstrate their truth. For my own part I think so highly of the profession I practise with such pleasure that I claim for its members that they stand before the public as the representatives of the whole circle of the arts and sciences as applied for the benefit of mankind: since the public directly or indirectly reap the benefit of every scientific or professional advance, by the teachers of medicine and surgery, as students, utilising from all fields of human labour anything which can possibly or probably be turned to the advantage of suffering humanity in the way of the prevention, the relief, or the cure of disease. The position of our profession in its public relations is consequently of such high importance as to induce me to lay it down as an axiom, that the interests of the profession and of the public are identical; when the profession advances in skill, knowledge, and character, the public prosper with it; when the profession sleeps or lapses into bad ways, the public suffer. And the truth of this axiom is as evident when we apply it to the profession and the public in a general sense, as it is when we apply it to the smaller public and professional circles of urban or village communities; indeed, it is in these smaller circles that its truth is the better demonstrated, for the elevating influence of a clever and good doctor in a small town or village is fully and generally recognised, as well as the unhappy influence of what must be described as the professionally indifferent, casual, or trade doctor. It is important, therefore, for the public to be taught to understand that, since it is in their interests that medical men should maintain a high tone of professional morality, so it is in the same interests that no scheme or custom which is calculated to lower the position or depreciate the value of the medical profession in the person of any one of its members should be encouraged or receive public support.

I would next wish to enforce the truth of the opinion that for a medical practitioner to prosper in the position in which he is placed he must do so through his profession, and by no by-ways or crooked paths. He should under all circumstances raise the standard of medicine high in the circle in which he practises, and follow it himself as a painstaking and conscientious disciple; and he should do this under the firm conviction that he will personally rise both in social status and in pecuniary rewards as he raises the profession he practises in the estimation of his neighbours. He should, moreover, be firmly convinced that he can rise by no less worthy means, and at all times scout the thought that he can raise himself by lowering in any way the profession of his adoption. As an important, if not absolutely essential, means to attain this object I hold it should be the routine habit of every medical practitioner to treat each patient, whether private, hospital, club, or parish, with equal consideration, and, above all things, in the true "professional spirit," which bids him employ every necessary means of investigation which may be available to enable him to form, if not a correct diagnosis, at any rate a "working diagnosis" of his case before he treats it. He will then do so with confidence and probably with success; and in doing this he will at the same time be doing what must be designated as a matter of primary importance to his profession, for he will be giving an object-lesson to the public, and be demonstrating in the most practical way possible the essential difference there is between an educated professional medical man and an uneducated practitioner, whether called an unqualified assistant, a prescribing chemist, a medical tradesman, or a quack.

That such an education is wanted everyone must admit, and that such should come from the medical profession is likewise clear; for no other class of men has knowledge enough to undertake it, or the will to do so if it had. The way I have sketched out is, moreover, I believe, the only true way to fulfil the object. Indeed, I believe that if this rule of practice which I have just enunciated had been more generally adopted in the past we should not have heard so much as we now hear of the evils of prescribing chemists and of the unrestricted practice of lay persons, for I much fear that it has been from a neglectful recognition of what ought to have been a standing rule of professional action—and the value of which I am convinced all my hearers fully recognise—that too many of the so-called educated, as well as of the poorly educated classes of society fail to recognise the difference between a qualified

[1] THE LANCET, Feb. 10th, 1894.
[2] Address to the British Association, THE LANCET, Aug. 11th, 1894.

medical man and an unqualified one, by whatever name he may be called. For where both qualified and unqualified men prescribe medicine or local applications without attempting to make, or without making, any "working diagnosis" of the disease for which treatment is called for, both classes are on the same level, for both lead the public to think that the practice of medicine consists in mere drug-giving; and under these circumstances the qualified man has no reason to complain of his qualifications not being recognised when the failure to make them recognised has been mainly his own. Again, let me ask, Has not the employment of unqualified assistants by registered practitioners tended much to confuse the minds of all classes of patients, and particularly the poorer, as to the distinction between medical men and druggists, and induced them to place such medical helps on the same level, since both classes of practitioners give "stuff" for symptoms without any diagnosis being made as to the nature or requirements of the case they have in hand?

With respect to rank quackery, what hope is there of seeing it abolished so long as human nature remains as it is? The educated members of society of all grades, as well as the poorly educated and uneducated, support, and love to support, bone-setters and illiterate quacks of every kind, but more particularly the dogmatic and self-asserting registered practitioner; for a man, whether qualified or not, has only to assert with sufficient emphasis and repetition, and with much noise and advertisement, that he can cure any trouble to which flesh is heir, and do so better than his neighbour, and he will find supporters; for certain members of these classes support quackery and professional quacks for the same reasons that lead others to oppose vaccination, the Contagious Diseases Acts, and vivisection—and that is on account of their lamentable or wilful ignorance of the merits of the practice they, on the one hand, oppose and, on the other, support, together with their unfortunate ignorance of the structure of their own bodies, this ignorance being certainly greater than it is of the structure and delicacy of the watches they wear, and which, when out of order, are assuredly not placed in the hands of quacks to restore. With education of the right kind and with some knowledge of how the human frame is formed and kept in order by natural processes the influence of quackery may be weakened, but such a period of education is, I fear, very remote. The Government, it is to be regretted, also encourages quackery in a way which is not to its credit, and they do this by accepting money in the form of stamps for patent medicines, which, if good, have no need to be patented to bring them into use, and, if bad, are helped to do harm by Government assistance. For as patents, drugs and mixtures are recommended to the ignorant public by having Government stamps, and, in addition, reap all the advantages of a free and, at times, unscrupulous advertisement, as well as of the published highly favourable opinions of men who thoughtlessly allow their names to be employed for trade purposes; this evil of patent medicines is not lessened with the knowledge that many of them are highly injurious and are annually the cause of death to many thousands, more particularly of infants. The Government, again, encourage quackery by neither taking action nor giving power to the General Medical Council or great medical corporations to check or put down the practice of surgery or medicine by uneducated laymen, although they have not only established at great expense a General Medical Council to look after the education of the medical students through the empire, and to see that all such should be well and liberally educated before they are allowed to practise upon the public, and at the same time have sanctioned pains and penalties against qualified men who from any cause may do harm in the exercise of their vocation; whereas, with a strange inconsistency, unqualified laymen of all kinds are left to do what they will without check or hindrance. But must I not add that the profession itself has thoughtlessly, but no less truly, encouraged quackery by too readily taking up every new medicine, whether its nature is known or not, which is freely and loudly advertised, and at the same time highly praised, by men who, after the methods of trade, seek to make themselves known as authorities, upon grounds which at the best must too often be described as slender?

With these general remarks upon some points connected with the practice of our profession, which must be regarded as important, I will now pass on to consider some of the questions which refer to the education of the medical student, and more particularly to the education it is desirable he should have before he commences the special professional programme; and upon this subject I believe I may say that there is in the profession a greater unanimity than it is customary to find. For I have no hesitation in asserting that the members of the General Medical Council, as representatives of all the licensing bodies—with the authorities of the Royal medical corporations and all thoughtful medical practitioners,—are convinced from experience that young men who have enjoyed the broadest and deepest general education are the best fitted to undertake and master, as they ought, the many difficulties with which the student of medicine has to grapple. Under these circumstances I hope the time is not far distant when for all university men an Arts degree, and for all others an examination of equal standard, will be required before they are allowed to enter the portals of the profession of medicine; although, with the view of giving a helping hand to the medical student—who, after taking his Arts degree, must now have five years for special medical study,—it ought to be arranged that in his Arts curriculum or preliminary scientific examination the subjects of physics, chemistry, and biology should be included. The student of medicine would then, under this arrangement, enter upon his purely professional work well equipped and with every prospect of success, and he would, I trust, with greater probability than can now be said to exist have unconsciously acquired in his university training a cultured mind, and with it something of the true "professional spirit," so that in years to come he will not only practise in that spirit, but when the business side of his professional work has to be faced—for there is a business side, and the questions of emolument and worldly advantages have to be considered—he will recognise the truth of the observations I have made in the early part of this lecture, and remember that he can only rise himself by raising his profession in the estimation of those who form his circle, and that he can never do either by lowering the position of his profession ever so little, or by allowing the "spirit of trade" to master the "professional spirit" and by practising it as a medical tradesman. With this scheme, therefore, before us, as the one which claims universal support, let me ask, Where is the room for the old system of apprenticeship, for the restoration of which we every now and then hear a feeble cry? The answer to this cry can be but one, and that is, "Too late, too late." Apprenticeship is as dead as Cæsar, and dead for ever. And need this be a source of regret? for I am convinced from personal experience and much inquiry that where one apprenticeship has proved useful to the pupil ninety and nine have been not only not useful, but positively injurious; for by such a system a boy was removed from school before his schooling could have been of much value; he was turned into a surgery to dispense in the company of assistants who were not always desirable companions; and he, moreover, rarely had a master who had the power or inclination to do anything in the way of teaching beyond dispensing and keeping books. Where he was fortunate enough to have had such a master, the pupil doubtless learned a confused something which in after life may have been of use; but reviewing the system all round the master was the only one who, as a rule, derived any certain benefit from its adoption, for he pocketed the premium which went with the apprenticeship and at the same time found a dispenser or useful servant in the unfortunate apprentice who, for five or more years, was bound to do whatever work his master might require of him. I earnestly hope we may hear no more of this bygone and dead system, which, with the present heavy demands upon the powers and time of the medical student, is an impossibility and an anachronism.

With these remarks on the preliminary education of the medical neophyte, I will now pass on to discuss several of the various questions he will have to consider when he has obtained his diploma or licence to practise—and it would be well if his teachers during his last year of study were to take some opportunity of leading his thoughts in this direction, for it is perfectly clear that in business questions business knowledge is essential, and good advice at this time must bring forth good fruit. This might probably be done by means of a post-graduate lecture, this lecture taking the place with advantage of the old "introductory," which has been nearly given up. For my own part I believe that the best step for a student to take before he goes into practice is to spend a year as an assistant to a good medical practitioner; for by so doing he would learn the business part of

his profession in a practical way, and at the same time be acquiring much more if the practitioner happen to be of a high class. Medical schools should keep a list of high-class practitioners in good practice who are willing to accept qualified students for this purpose, and the practitioners would doubtless profit by the plan.

The subject of *professional remuneration* must now claim our attention; it is a difficult one to handle, but it has been the cause of no little recent complaining and heartburning. There is, I believe, some reason for this feeling, since much public professional work is notoriously ill paid, and private work is no less so. But these facts can in a measure be probably explained by the existence of unwholesome competition and under-bidding; for it would seem to be true that there is no limit to these destructive processes. Not long since, when in conversation with an active and thoughtful chairman of a provincial county council, he told me that he was as chairman ashamed at the smallness of the salaries his Poor-law medical officers received, and yet, he added, he was quite alive to the fact that if the present occupiers of the posts refused to work for such remuneration others would be readily found to accept the positions. He admitted the parish parsimony as regards payments, but, as he expressed it, with such competition before him, what was he to do? The same complaints may doubtless be made with reference to clubs, and more particularly as to the so-called medical aid associations. Indeed, rising higher in the scale, and with respect to honorary appointments, men who would wish to stand well with their *confrères* are at times too ready to accept positions which others have deemed it right to vacate. We must suppose that men who do these things do so with the hope of some personal advantage, but they clearly have little thought or care of professional dignity or what is due to their professional brethren. In such men the "spirit of trade" has mastered the "professional spirit," and is allowed to have its way. This conduct all round is bad and sad; but how is it to be prevented? Some men, in their anxiety to put an end to these and other practices, the evils of which they see too well, call out in their excitement or thoughtlessness, "Let the General Medical Council or Royal Corporations correct these evils"; whilst others, with more self-reliant feelings, look to defence associations, medical associations acting as courts of ethics, to pass judgments and enforce decisions. But I would wish to point out that in this looking for outside aid and longing for some outside power to relieve or cure the maladies which affect the body corporate of our profession we are forgetting that the diseases to which attention has been drawn, with others, have been brought on and are maintained by our own action or want of action, and that to look for a sound remedy we must therefore look to ourselves, for "our remedies oft in ourselves do lie." To aid us in this direction by all means let medical defence unions, local societies, and medical associations be formed, if we have not enough, and more particularly let these unions, associations, and local societies bring before the General Medical Council or Royal Colleges every act of grave professional misconduct of registered practitioners, and in so doing support their causes with evidence which must satisfy their judges; for remember, the functions of these bodies are simply judicial. By so doing the evils of covering, of unqualified assistants, of giving false certificates, of undue or gross forms of advertising and touting for patients, would speedily be abolished, and with these evils many others would succumb which naturally follow such practices; but to put an end to over-competition and under-bidding, with other ethical evils, is another matter, and is one, I fear, which can only be done by raising the self-respect of the individual members of the profession by means of the higher education to which attention has been already drawn, although it may probably be much helped by the establishment of some "professional medical court of appeal" or "board of medical discipline" composed of certain members of the council or comitia of the Royal Colleges, nominated by the Colleges, with leading provincial, country, and urban practitioners nominated by the profession, to whom all medical grievances could by the local societies or associations be submitted for their consideration and decision—the duties of such a board being much the same as those which now devolve upon the Censors of the Royal College of Physicians with respect to their own Members; and upon the Council of the Royal College of Surgeons through its President with the Members of the College. Such a strong appeal court would have the confidence of the profession and public, and would help materially to suppress doubtful acts and check many evil ones before they become grave enough to be pronounced "infamous in a professional respect" and so render the culprit liable to be removed from the Register. The moral effects upon the profession of this "Board of Medical Discipline" would also be very great.[3]

In the practice of our profession we should never forget or cease to impress upon its younger members that our patient's interests are those we should always primarily consider, and that in all our practical and scientific professional work the public good is its ultimate object; but in doing so let us bear in mind, in order to realise this leading purpose, that it is all-important for the interests of the public as well as for the due exercise and dignity of our profession that every practitioner of medicine should hold an independent but responsible position, and that in his professional work he should be left perfectly free from lay control, although amenable to lay censure. It is also equally necessary that he should be adequately paid for his professional services by all classes according to their means. Under these circumstances all measures, whether under the guise of charity or called "provident," and all hospitals, general, special, or private, which encourage the public to seek professional advice for little or nothing are to be discouraged as helping to pauperise and degrade the public at large. The same may be said of the members of our profession who induce or tempt the public to do the same thing by means of private hospitals, competing private dispensaries, touting clubs, and associations, or who are ready to accept at a reduced figure, over the heads of their neighbours, appointments which have been put up by laymen, as it were, to auction or competition. Medical men by such acts adopt the surest means within their power to lower the position of their profession in general estimation; and at the same time do injustice to themselves and the public by not giving to the latter the best services the profession can supply, whilst they must, in addition, lose their own self-respect even if they happen to gain cash by their unworthy actions. For let me ask, How is it possible for a man who is ill paid or overworked, or both, either to give, in the interests of the public, the professional attention it is essential for him to bestow on every case he has undertaken to attend; or to maintain, in the interests of the profession, the position to which he is entitled and his own self-respect?

The questions I propose now briefly to bring before you, and upon which I would invite your consideration, are the following: the working of public provident dispensaries; the conditions under which private dispensaries should be worked and sanctioned; the conditions under which country and town clubs should be worked; the good or evil influences of medical aid associations worked by laymen for their own profit; the duties of unqualified assistants; and how midwives or, what seems to be a better term, "nurse midwives," are to be educated and utilised for the public good. All these questions, with many others, are well worthy of the attention of your society—one might be taken up each session and well threshed out, for let me say that the solution of most, if not all, these questions must rest in the hands of the general practitioners of this country; and I must also express my conviction that clearly formed opinions upon each and all of these subjects, formulated after due discussion by such societies as this, would do more to mould the minds of the professional and lay public for good, and form a better basis for future corporate action, than any opinions emanating from the General Medical Council or the Royal Medical Corporations.

Practical questions of the kind enumerated should be primarily settled by the great body of the profession in a practical manner, and it is through these local societies that the matured and independent opinion of the profession should be expressed. When the profession has spoken through these means, extraneous aid may be sought. The press is always ready to give help to any movement, but for the profession to leave important questions such as these for the press to solve is a mistake, for remember that what is called the press is but the product of a handful of active men. It is likewise a mistake to look to the General Medical Council or Royal Corporations to give, under existing circumstances, judicial opinions upon these and other complicated questions, as it is urging these bodies to seek for powers, since they do not possess them, to enforce their views when formed; for these important bodies have enough to do to carry out their respective registration,

[3] This court of appeal or board of medical discipline should financially be supported by the societies who are represented upon it, the subscriptions of the members of the profession coming through the local societies.

educational, and examination duties, as well as to purge their registers of men who have openly and unquestionably offended against the laws of their country or their corporation. To ask these bodies to consider and solve ethical questions connected with professional work and professional advancement, and, having solved them, to seek powers to enforce their views, is too much to expect, even if it were desirable. I would, however, wish to remind you that the General Medical Council has done, and is now doing, good work in putting down the serious public offence of "covering" and of giving false certificates, more particularly of death, by unqualified practitioners. It does good also in expressing decided opinions upon gross ways of advertising and other professional delinquencies as brought before its notice, and I feel sure that the report upon medical aid associations which was issued last year will help the public and profession to come to a definite conclusion as to the merits or demerits of these new trading bodies, if it does not lead the General Medical Council to pronounce a definite opinion upon their nature. I would also assure you that my own College—the Royal College of Surgeons of England,—with its present limited disciplinary powers, has not been, and is not, idle in the same direction, for there are few meetings of the council before which some complaint of undue modes of advertising, and of the employment of secret remedies, with other illegitimate methods of carrying on the "medical trade," is not brought; and if the offence charged is not serious enough to justify the name of the offender being taken off the College books, a serious expression of opinion on the part of the council upon the nature of the act complained of, and a decision that the misdemeanour is inconsistent with the declaration made by the delinquent when he was admitted a Member of the College "that he would demean himself honourably in the practice of his profession and do his utmost to maintain the dignity and welfare of the College," are often enough to induce him to mend his ways and adopt more legitimate means of carrying on his work. At any rate, of this I am sure, that these expressions of opinion upon the part of the council do great good and tend to stop ways which lead downwards; and I likewise believe that if the attention of the council were drawn more frequently by the Members of the College to methods which weak men adopt from their weakness, and which stronger men know are injurious both to the profession and the public, the action of the council for good would be more frequently repeated, to the great advantage of the profession and the suppression of bad ways. It might be well for you to consider whether duties of this nature should not be part of the work of such societies as your own. A society could well do what individual men might shrink from. I may, however, tell you that during the last seven years—besides all Members of the College who have been convicted of criminal offences—six Members have been removed from the list of Members for issuing advertisements or practising secret methods of cure which the council regarded as "prejudicial to the interests" and "derogatory to the honour of the College," as well as "disgraceful to the profession of surgery"; and six other Members who had offended against our by-laws in the same way have simply been let off after they had made "declarations" that they would not so offend again; whilst one other Member was removed for being associated with a disreputable museum. Thus thirteen Members have been brought before the council in seven years for having seriously offended against the by-laws of the College, besides many others who have been satisfactorily dealt with by the President for minor offences. But let me beg of you not to rely upon the Royal Corporations for the help which, to be effective, must come from yourselves.

Let the great body of the profession pronounce with no uncertain voice, through local societies, county associations, and private societies, that *this*, *that*, and *the other method* of seeking or obtaining practice and notoriety are unprofessional, derogatory to the interests of the profession, and injurious to those of the public. Let such societies as yours, and all others like it, exclude men who do such wrongs from their lists of members if they persist in their bad ways after they have been warned, and let the excluded members know the reason why they are so excluded; and when the profession as a body has spoken, greater powers may be obtained by the corporations, for I must tell you that seven years ago, when the Royal College of Surgeons applied to the Privy Council for some enlargements of its disciplinary powers, its requests were refused—not, however, on account of any objections which were raised by the Privy Council to the powers asked for, but on account of the opposition of certain Fellows and ill-informed Members of our own body, who had placed themselves in an antagonistic position to the action of their College and had made a great noise about the matter by means of the press and other ways. If this opposition had not taken place the disciplinary powers of the College would have been now enlarged, to the advantage of the profession generally as well as of the public.

With respect to "public provident dispensaries," I believe that such institutions may be made of great value both to the public and the profession: to the public, by helping a large number of the wage-earning and poorer members of the community from falling into the pauper class, as well as by encouraging in these classes the spirit of thrift and independence which is so essential for national prosperity; and to the profession, by enlarging the field of observation for the local practitioners, and by securing for them reasonable remuneration for their professional services, with many other secondary advantages. But in order to secure these desirable ends it is all-important that only such members should be admitted to the advantages of the dispensary as are of the wage-earning and poorer classes, and that the scale of admission charges should be calculated in single persons as upon a percentage of their wages, and in families upon the aggregate wages of the family or household and not upon that of the member only in whose name the dispensary ticket may have been taken out. I should like to see in every district one or more public provident dispensaries for the "well-to-do poorer classes" as we now see dispensaries for the pauper class. I would have these dispensaries managed by a committee of laymen, medical men, and possibly representatives of the classes in whose interests they exist. Their doors should be open to registered members, but their rules should be such as to allow of any of the "well-to-do poorer classes" being able to obtain speedy help and relief upon well-defined terms from any one of the medical men of the district in the event of any sudden illness or accident taking place. Every medical man of the district should, moreover, be admitted a member of the staff, should he desire to be so, and receive remuneration from the dispensary for the work he may have done for it.

With parish dispensaries for the very poor, and provident dispensaries of the kind alluded to for the "well-to-do poor," the needy classes would be well looked after, and the medical officers of both would be fairly treated; for any applicant to one or other of the dispensaries, if of the wrong class, could be passed over to the right class. Any medical man in a dispensary district who cares to do dispensary work should have the power of placing a poor patient upon his dispensary list, and of attending him as a dispensary patient; and any poor patient should have the power of consulting any medical man of his district who is on the dispensary staff upon dispensary terms. With the existence of these public provident dispensaries, so-called "private dispensaries" would not be needed, and consequently should not be allowed; since such dispensaries are too often the mere speculative adventures of needy men who trade upon the poor for their own ends, and certainly not for the poor's advantage, whilst they degrade the profession in public estimation and doubtless degrade the dispensary medical officer to the level of a small and unscrupulous tradesman. Again, town and country clubs are institutions to be encouraged, for the same reasons that have been adduced in favour of public provident dispensaries; but it seems to me that the scale of payments now required should be somewhat higher than that which has been demanded in past years, for wages have been much raised, and the medical club charge should be a percentage rate upon wages. With the adoption of this suggestion I regard club work, when honestly carried out, as beneficial to the public and valuable to the medical practitioner, who not only obtains fair remuneration for his work, but carries out his responsible duties untrammelled by lay interference. As to what are now called "medical aid associations," I am at a loss to know where, in most of them, good is to be found; for it is clearly degrading for any qualified medical man to do professional work as the paid servant of a committee of illiterate or even educated laymen, and consequently to work under their control; and it is certainly injurious both to the public and profession that this medical servant should be required to look after any number of members admitted by a lay committee to the supposed advantages of the association upon terms concerning which the medical officer has no voice and when he knows that he

is often called upon to treat many more patients than can possibly be treated with due care and proper skill.

It is likewise a clear wrong both to the public and profession that members should be admitted to these associations who are not of the wage-earning or allied classes, and who are well able to pay the limited charges of a private practitioner. The medical aid association is a development of the medical club, but it is a growth of a diseased nature, and it ought to be either brought into line with public provident dispensaries or club practice, as sanctioned by and based upon the Friendly Societies Act, or it ought to be rooted out of professional public work. I have a very strong belief that these medical aid societies have been wrongly admitted under the Friendly Societies Act, and I wish some leading lawyer would take up the question.

As to the duties of unqualified assistants, I believe all will agree with me that they should be reserved to home duties, not far beyond those of a dispensing assistant. No visiting and dispensary or outside club work ought to be entrusted to them beyond a visit of inquiry, nor ought they to have power to sign professional certificates of any kind. If they are employed beyond these limits harm is certain to ensue. And, lastly, let me say a few words upon the burning question of midwives, for we all must admit that midwives are necessary, since in some districts they divide the midwifery work between them, and in all districts they hold an important position in the social scale. If, then, midwives are necessary, it is equally evident that they should be efficient, for if they are not efficient they are dangerous assistants and had better be away, and if they are to be efficient the conclusion is certain that they must not only be made so, but that their knowledge should be tested by competent examiners before they are allowed to embark on the responsible and serious duties they have undertaken. With respect to the question of their education, it goes without saying that the teaching must be practical, although based upon a certain amount of anatomical knowledge, and that this practical knowledge is only to be acquired at lying-in hospitals which are sufficiently well officered to afford a guarantee that the teaching will be enough, but no more than enough, to ensure competency to attend a natural labour and to know when true professional assistance is required on account of the many difficulties and dangers which may arise. For I would wish "midwives," as they are now called, to be regarded as "nurse midwives," and even to be named such—and I am pleased to add that this suggestion has been adopted by the General Medical Council—since the term carries with it the meaning that they are really nothing but skilled nurses educated for special work, and that they are always acting either directly under medical supervision or under the clearest instructions that they are to call in medical professional assistance in every case of suspected or real difficulty or danger, and, in the majority of cases, the district medical officer is the one to be called in. Finally, let me ask, How is this examination work to be conducted, and who is to conduct it? For my own part, I feel strongly that such important public work should not be entrusted to any private society or institution, however eminent, but that it should be placed and left in the hands of some responsible public body. I do not mean such a one as a county council or allied body; but I would wish it to be undertaken under the direction of the two Royal Medical Colleges of England—the Royal College of Physicians and the Royal College of Surgeons—by means of examining boards, central or district, composed of either specialists or general practitioners, or of what would be preferable, both combined, as may after full consideration be deemed best, the curriculum of study as well as scope of examination resting entirely with the two Royal Colleges.

I must now bring these somewhat desultory remarks to a conclusion. The subjects I have brought before you are all of importance, and my views upon them have not been formed hastily; for I have been called upon to consider them with care when President of the Royal College of Surgeons of England and as member of the General Medical Council. Whether these views are right or wrong I leave to you to decide; for their full consideration is well worthy of the attention of this and other allied societies. Whatever solution you may find for the different problems which I have brought before you, of this I am sure—that the conclusions you come to will help the final solution of them all and so tend to the advantage of our profession and the welfare of the public.

An Address

ON

A RIGHT PERSPECTIVE IN MEDICAL THOUGHT AND PRACTICE.

Delivered before the Torquay Medical Society, Oct. 5th, 1894,

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MR. PRESIDENT AND GENTLEMEN,—Our sense of proportion in things medical, especially with regard to symptomatic phenomena and measures of treatment, is liable to distortion from various causes. The attractiveness of new discoveries, whether they be pathological or clinical, tends for a time—until they have taken their allotted place in the onward march of our science—to loom too largely in our foreground and to draw off our attention too much from other and more familiar facts and teachings with which they may in no way clash. The accurate estimation of the body heat by the clinical thermometer—a great discovery in its application to medicine in my student days, which has made its way so thoroughly into our daily practice—tended for a time to command our too exclusive regard; the readings of the thermometer were apt to be too exclusively relied upon, and to this day I find it difficult to keep the student's attention awake to the importance of careful observations of the pulse in association with those of temperature. Fortunately, the sphygmograph was invented soon after the thermometer came into common use and before the traditional regard for pulse characters had been lost sight of, or the circulation might have been fairly forgotten or "taken as read." In febrile illnesses this weapon of precision—the sphygmograph,—at first threatening to find a use in everyone's hands in routine work, was not without a danger of its own to diagnosis, but, happily, that danger has passed, and its usefulness as a delicate recording instrument is fully established. It has had in the hands of experts the great value of teaching us and delineating for us accurately the important features of the pulse, which we may perceive by our educated finger touch.

Imperfect readings of thermometric records and an imperfectly proportional combination of thermometric with other clinical and pathological data seem to me to be still responsible for errors both in diagnosis and treatment. It must be observed, too, that recent and, as yet, not fully disclosed pathological researches give a new interpretation to some pyrexial phenomena which the thermometer but faithfully records, and are shedding a new light upon the natural history of pyrexial diseases. Thus the interesting stories which—some of them, perhaps, fables—come to us from our bacteriological laboratories, of the loves and antipathies, the triumphs and disasters, in the microbe world assume a new and strange fascination for us as we come to recognise ourselves, our blood and tissues as forming more and more largely their playground and battlefield.

We in practice direct our attention too exclusively to the higher excursions of the thermometer, as indicating, apart from any corroborative symptoms that may or may not be present, a condition which *per se* calls for active interference, whilst our tendency is to ignore, or even to bring about, low ranges and deep depressions of temperature as salutary or of no importance. It is probable, however, that these depressions, especially when they occur prematurely or are artificially brought about in the course of an acute febrile illness, are fruitful of opportunities for fresh microbic activity. The results of bacteriological investigations are in favour of this probability, for it is found that the bacilli of tubercle, of anthrax, of pneumonia, of influenza, enteric fever, and probably of rheumatism germinate at the lower ranges of temperature, between 97° and

99° F., and that their multiplication is arrested, although they are not themselves killed, at 104.°

Disease.	Cultivations grow—					
	In perfection.		Feebly.		Not at all. Highest.	Not at all. Lowest.
	C.	F.	C.	F.	C. F.	C. F.
Tubercle	37°	98·6°	30° ...	86·0°	40·0° ... 104·0°	28° ... 82·4°
Pneumonia	37°	98·6°	20° ...	68·0°	42·5° ... 112·0°	16° ... 60·8°
Enteric fever ...	35°	95·0°	20° ...	68·0°	43·0° ... 109·4°	14° ... 57·2°
Influenza	37°	98·6°	18° ..	64·4°	(?)	15° ... 59·0°
Diphtheria	37°	98·6°	22° ...	71·6°	58·0° ... 136·4°	15° ... 59·0°

Clinical observations of tuberculosis in its active phases and of the other acute febrile diseases mentioned would seem to point the same way—viz, to the probability that bacillary activity becomes aggressive at temperatures near or below the normal, and is inhibited or enfeebled by the higher temperatures. Thus it is under conditions of depressed vitality attendant upon severe chills, nervous shocks, and the like that tuberculous and pneumonic, influenzal and rheumatic, organisms are especially apt to take root and germinate within us. It is, furthermore, during the periods of depressed subnormal temperature that relapse is so apt to occur in influenza, rheumatic fever, typhoid fever, and pneumonia; and I am strongly of belief that it is during the periods of hectic fall of temperature in tuberculosis that fresh bacillary activity is especially to be feared. I am not aware of any thermometric observations having been systematically made under conditions of severe chill, shock, &c.; but I think it was Rosenthal who demonstrated experimentally that exposure to continued draught actually lowered the temperature, and the several experiences I have just referred to seem mutually to help the explanation of each other. It is in accordance with current thought on the matter to suppose that the toxines secreted by the bacillary and other allied micro-organisms in course of their germination may indirectly, by the pyrexia they excite, check for the moment further developmental activity, and that thus the vital resistance of the patient has another chance of victory over his microbic foe, which has become, in a sense, "hoist with his own petard."

Now, as we may often observe in cases of pneumonia, typhoid fever, influenza, &c., in which the temperature has been artificially depressed (by antipyretics, not of the class of germicides) to a point below that which may be regarded as the range of temperature normal to the disease, the chart record is spoiled—e.g., in pneumonia—by the normal crisis being replaced by a prolonged period of fluctuation, or in typhoid fever the early depression being purchased by an exaggeration and prolongation of the fluctuations of the later periods. But have we observed any advantage to the patient to have attended this altered type of temperature? I think, as a rule, not. There is a range of temperature, normal and fairly constant, to each kind of febrile malady, by which alone indeed each malady may be recognised. Variations in intensity may be observed and also variations in the manner in which individual patients are affected by the same degree of temperature. Furthermore, under conditions of exhausted nervous control rather than intensified poison influence, we see sudden and dangerous accessions of temperature which we can generally control. But, on the other hand, the most deadly forms of bacterial fevers are sometimes attended with an abnormally low temperature, when the patient seems to be hopelessly overwhelmed with the heavy dose of organic poison. Need I remind you of certain cases of scarlet fever, of diphtheria, of influenzal pneumonia, in which the temperature never rises to that normal to the diseases, and the patient dies. Pyrexia, then, is in itself not an illness, but a condition or symptom which, if it threaten disaster to the patient, must be checked, but which otherwise should be regarded in due perspective with the other symptoms proper to the illness in hand. This line of reflection needs to be more emphasised now, because of late years our means of treating symptoms, pyrexial amongst others, are much more prompt and efficacious. The old treatment of fever by saline diaphoretics was at least harmless in its inadequacy, but now that we have more power we must use it with discrimination, and hesitate, without strong reason, to reduce a definite febrile temperature prematurely below that which is within the medium normal to the particular stage of the disease, lest we re-establish prematurely those conditions under which fresh germination of the disease organisms may again become aggressive.

Depression of temperature, especially when it occurs in the midst of fever—without any such cause as shock from hæmorrhage or perforation—requires steady and somewhat stimulating support. In the hectic fever of tuberculosis, whilst the higher peaks of temperature may need to be moderated, the low depression and consequent sweatings and exhaustion require our especial attention, strongly calling for treatment by stimulating food and nerve tonics, for it is during these periods, occurring when the enemy is still in possession, that fresh aggression is to be feared.

The bacteriological aspect in which acute and many chronic febrile diseases have now to be regarded has already greatly modified their treatment and will no doubt in the near future have a still deeper influence both upon prophylactic and therapeutic treatment. The first effect of the new doctrines, however, was certainly to fill the mind's eye of many a practitioner with a picture of rampant organisms to be eliminated at all cost without reference to other symptoms; and in his hot pursuit of the little devils by which they had become possessed his patients stood a fair chance of becoming absolutely pickled by antiseptics. Of late years we have come to recognise the fact that the tissues themselves, in proportion to their vitality, have the most powerful antiseptic and even phagocytic action in defence against local bacillary aggression, and that the right part for antiseptic microbic treatment to play is the duly proportionate part of a valuable auxiliary—a due respect being paid not only to the parasite, but also to its host. On the other hand, let us for our comfort contrast the times, not long ago, when phthisical invalids were shut up in their rooms all the cold weather, and dosed with saline expectorants and opiates, with the present, when, thanks to our better knowledge of the real nature of these maladies and to the encouragement based thereupon of fresh air treatment at home and abroad, the mortality from phthisis has greatly diminished and some check has been given to the prevalence of the complaint. The hygienic treatment of fevers, and especially of scarlet fever, has also been immensely changed for the better since the recognition of bacterial agencies in their pathology.

The immunity of persons who have had acute specific diseases from fresh attacks within a variable period appears with increasing probability due to some change in the fluids which has been brought about by the action of the toxines of the peculiar microbe with which they have been attacked, or which has for the time of their illness flourished within them. This idea has led up to the treatment of various specific illnesses by inoculation with serum from persons or animals recently attacked but now immune, and also to an inoculative treatment of diseases allied to that of Jenner for small-pox, but little dreamed of by him. It is a curious illustration of the bearing of my text that, at the moment when research is pressing these discoveries upon us, a keen contest is being waged as to the efficacy of vaccination in the prophylaxis of small-pox.

I do not know of anything that calls more for the exercise of a clear perspective view of varied circumstances than the duty of advising sick or partially disabled persons as to the measures, climatic or other, which are best adapted for the preservation of their lives, or for the maintenance of it in most comfort and best usefulness. Of course, an accurate diagnosis is necessary in the first place; then comes the more difficult problem of making an accurate forecast as to the probable course of the malady under the present circumstances, and the degree of temporary or permanent amendment which with certain sacrifices can be promised. It is quite essential to come to a definite decision in our own minds on these points before we can give serviceable advice to our patients; but there is a further element in the problem, How far can the patient carry out the measures indicated by the strictly medical requirements of his case? It may be said that this question is outside our province—it obviously involves many considerations outside the immediate medical aspects of the case; but our responsibilities cannot be limited to merely and crudely stating the facts of diagnosis, the probabilities or certainties of prognosis, and the line of action to be pursued, leaving the patient to adopt or disregard it, as he may choose. We have to take our fellow being in his environment, and consider his difficulties all round, and what is best

to do, under all the circumstances, within his resources, for himself and for his family, and under his public or private responsibilities. There are many grades of environment between that of the millionaire, who would risk health and even life to continue a transaction that shall add a little more to his hoard, and the anxious parent or man, surrounded by heavy professional or public responsibilities involving the welfare of others, who is desirous for help to disclose to him the path that may be the best. The trusted family adviser, who knows the habits, temperament, and surroundings of his patient, and the history and progress of the malady—who knows, in fact, the man as he was and as he has become,—is the person best qualified to help in such a conference, and to exercise his judgment as *amicus curiæ*. But this advantage is often sacrificed to the mistaken desire for what is called an "unbiased opinion." To glance through such a long vista of facts and circumstances, keeping them all in their due perspective, is one of the greater and more difficult problems of our work, and we can but tax our knowledge and sympathetic common sense to the utmost in the task we undertake.

There are other less complex cases, however, which frequently come before us, in which it is equally desirable and far more easy that our advice should be proportionate and within the bounds of practical achievement. You may have heard of the story of the poor washerwoman who consulted a medical man about her little boy, very ill with influenza, and received imperative directions to procure for the child champagne and oysters to sustain his waning strength. The child died and the poor woman explained to the medical attendant that she had been unable to afford the champagne and oysters, but had done her best in the spirit of his instructions by procuring for him some ginger beer and periwinkles! This grotesque interpretation of the medical man's magnificent but impracticable orders conveys a lesson which I think a little heart-searching will bring home to most of us—viz., that we do at times miss the mark in practice through want of proportionate perception, by advising measures impossible of adoption, when there were others quite as good although more homely for the case in hand, and by selection of which the bitterness of after-regrets would have been avoided.

Selection of climate is too large a topic for me to dwell upon now; it, however, affords many opportunities for the exercise of a sound, level-headed judgment that saves much distress of separation, much useless expenditure, much vital exhaustion and fatigue, by classifying cases—firstly, into those for which any immediate removal beyond the near reach of home is not to be advised; and, secondly, into those for which climatic measures may be distinctly recommended. It may be that in some amongst the first series rest and treatment may so far effect recovery as to render them well fitted for future consideration under the second heading. For each of those coming under this latter series we have next to decide what are the two or three measures which are best for them in the order of merit, and then to determine on that amongst them which is possible or most practicable. For suitable cases, carefully selected, there is no more helpful measure than a well-arranged sea voyage; yet it is, perhaps, amongst those sent for sea voyages we most often hear of hopeless and helpless patients adrift from those who should look after them. It seems almost impertinent to remark—yet I will venture to say that all will admit the pertinence of the observation—that clear and satisfactory answers should be obtained to three simple questions of any patient for whom, on grounds of health, a sea voyage is in contemplation—viz., (1) is the patient a good sailor—i.e., can he eat and sleep well on board ship? (2) can he afford to go with ample accommodation and with some responsible companion, or at least having some relative or friend to receive and look after him on arrival at his destination? or (3) is he an experienced cosmopolitan, independent of friends, aware of and prepared for all the vicissitudes of the voyage?

No one can be more fully assured than I am of the immense importance of climatic change and all that it entails in properly selected cases of all kinds of illnesses; but no observant person can deny that numbers of cases which are either sent or on their own responsibility go abroad would do much better to devote an equal or a less outlay in securing the conditions most favourable to their wellbeing in their own country, if not at their own homes. And there can be no doubt that much more might yet be done to render many of our home health resorts more attractive and better adapted to the needs of invalids. I would mention especially balcony arrangements in houses, improved bath chairs or lounges arranged to catch the sunshine and to shelter from through draughts, supervision of invalid rooms with regard to dust, ventilation, &c., steam yacht trips to encourage sea voyages by instalments, appropriate baths, and recreation places. With regard to public sanitation, our health resorts are more than equal to any in the world, and, having regard to our improved knowledge of the pathology of those diseases for which health resorts are much in request, they ought to prove more attractive even than they are. It seems, at present at least, almost necessary for persons to go abroad for, it may be, one, two, or three winters in order to learn what I may call the discipline of invalid life and to establish a tolerance of their malady. After this time, having broken the thread of home regrets and former ambitions—having, in fact, gauged the conditions under which life is for them possible and interesting,—they are in a position to find the place where they may permanently dwell and root their interests. With some preliminary experience of this kind on their part, and with the weariness of a wandering life behind them, it is sometimes easy to help a right decision.

I hoped that time might have allowed of my touching in some detail upon some points in the pathology of repair and compensation. There are many lesions that we have been accustomed to look upon as purely destructive which are not wholly so, but have for their object the preservation of the patient under the adverse circumstances into which he has fallen—e.g., the rapid softening down of tuberculous consolidations which, like the eliminative suppuration of a cervical gland, is a necessary pathological preliminary to cicatrisation if the initial disease process has been of sufficient intensity. Laennec long ago shrewdly remarked that phthisis was only curable in its third stage—i.e., that a cavity proportional to the area of caseated lesion must form before it could cicatrise. This reflection is often of great help to us in prognosis, especially in those cases of extensive one-sided tuberculous consolidations, the breaking down of which entails prolonged hectic and a downward course. We are hopelessly expecting the near approach of the end, when the temperature fluctuations lessen and cease, the appetite and strength return, and the patient gradually recovers, with the loss, it may be, of a considerable portion of one lung. Now, if we bear in mind that softening is a process eliminative as well as destructive, that it necessarily precedes repair in these cases, and if we observe side by side with the destructive changes the signs of fibroid shrinking of the surrounding lung, and of compensatory enlargement and function in the other lung, we may often save our own reputation by giving a more guarded and less uncompromising hopeless prognosis, and avoid playing into the hands of quacks and charlatans, who live and thrive on "hopeless" cases. The compensatory adjustments in heart disease are, again, almost limitless; there is no class of diseases which from this cause reacts to judicious treatment so wonderfully—the more wonderfully when we consider what a restless, hard-worked organ the heart is. But then we must be very careful not to mistake compensatory alterations for disease manifestations; for instance, he would be a very unwise man who would endeavour to give a different character to the water-hammer pulse of aortic regurgitation, or would give drugs to lessen the hypertrophic action of the heart in this disease. For it may be laid down as a proposition that the wellbeing of the patient with aortic regurgitant lesion is proportionate to the characteristic features of his pulse, and when these features are lost it is by bringing about their return that we set the patient on his legs again. Similarly in chronic renal disease the tightened vessels and the hypertrophied heart are compensatory lesions, calculated to maintain the blood pressure necessary for the continuance of efficient kidney function, and our powerful remedies for relaxing arterial tension are misused so long as the heart holds its own. It might be well for the student if a few lectures at the end of each course of morbid anatomy were devoted to the pathology of repair and compensation. It is indeed important to maintain a clear perspective in our view of disease by looking aside from and beyond the lesion we have recognised for the possibilities of compensation and repair, and by so doing to avoid too gloomy a prognosis and a want of heartiness in the treatment even of desperate-looking cases; and when the end must come, we have still the hopefulness instilled into our minds by the Scriptural metaphor: "That which thou sowest is not quickened, except it die."

DOES BAKING STERILISE BREAD?

BEING AN INQUIRY, ON BACTERIOLOGICAL AND OTHER GROUNDS, AS TO HOW FAR BAKING AFFECTS THE VITALITY OF ORGANISMS IN DOUGH.[1]

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THE following paper is founded on a large series of experiments. Its main conclusion is that baking does not necessarily destroy the vitality of micro-organisms (or their spores) that may be contained in dough. Briefly stated, we have succeeded in obtaining cultures of thirteen different kinds of microbes from bread taken out of the centre of recently baked loaves. Our contention, then, is that baking does not necessarily sterilise a loaf. In order to grasp the full significance of that proposition it will be well to review the circumstances that have led us to undertake the present inquiry.

One of the joint authors of this paper, Dr. Waldo, medical officer of health to St. George's, Southwark, has for some time past been endeavouring to reform the insanitary conditions of the cellar bakeries in his district. There has been little serious attempt at denial of the charges of unwholesomeness brought against these underground workplaces; indeed, the case against the London bakers could hardly be better summed up than has been done by one of their most ardent champions in the following passage:[2] "The indictment is that half the bakeries in the metropolis are underground; that there is little or no ventilation .....; the air is vitiated from many sources, sewer gas may enter through the drain openings in the floor; ..... and that sewage may, through a defective drain-pipe, force its way into the bakehouse. Add to these a closet opening into the room; the men smoking or chewing tobacco; rats, cockroaches, spiders, and other insects in incredible numbers, and general filthiness—and we have something like a fair picture of Dr. Waldo's typical underground bakehouse. This is revolting enough, but add a few realistic touches, showing the operatives kneading the dough while suffering from a form of eczema known as 'baker's itch,' the sweat from their arms mixing with the dough, and we have enough of the nauseous to satisfy a glutton." The question of the insanitary bakehouse, it should be clearly borne in mind, is raised on two distinct and separate grounds—namely (1) the health of the bread producer, and (2) the health of the bread consumer.

1. *The health of the bread producer.*—Into this part of the question we do not now propose to enter; the point has been fully dealt with elsewhere. Suffice it to say that journeymen bakers, as a class, are unhealthy and short-lived.

2. *The health of the bread consumer.*—Hitherto it has been assumed that, however filthy the surroundings of the bakery, however contaminated the flour or other ingredients of the dough, yet all was set right by the mere process of baking in the oven, which destroyed those living organisms now shown to lie at the root of most diseased conditions. In short, it has been a generally accepted belief that the loaf left the oven in a sterilised condition, incapable of conveying disease to the consumer. This view has been forcibly expressed by a correspondent in one of the bakers' journals. "An unhealthy bakehouse," he writes, "is bad because it is bad for the baker, and not because of any injury likely to result to the consumer of his produce. Dr. Waldo has painted a picture of a wretched cellar bakehouse, but he does nothing to show that bread, produced even under these extreme conditions, is capable of causing zymotic disease. The dough in an underground cellar may be as unhygienic as possible; it may be a very hotbed of bacilli; it may swarm with all the germs known (more or less imperfectly) to medical science, and yet the bread made therefrom would be no whit the less wholesome. The loaf has been purified by fire. Germs cannot resist the temperature of the baker's oven, and it is not too much to say that there is more danger of infection in one single quart of diseased milk, or in one glass of unfiltered water, than there is in all the bread made by all the bakers of the metropolis from one year's end to another." The foregoing contention that baking sterilises the loaf is one of the chief arguments advanced by those who defend the present system of cellar bakeries. It is founded entirely on assumption. Our present investigation was started primarily to test the truth, or otherwise, of that assumption.

There is little need to point out that specific pathogenic organisms may gain an entrance into insanitary bakeries. Sewage contamination has been repeatedly shown to exist in those places. Several gross cases of the kind, for instance, have been proved before the London magistrates during the present year. Then, again, a certain number of bakers are phthisical. These men are closely confined to the bakehouses for ten, twelve, or even twenty hours at a stretch. It has been again and again abundantly proved that the dust of rooms occupied by phthisical patients contains tubercle bacilli. Lastly, it is obvious that germs in a bakehouse could easily be conveyed to the dough either by the air, by utensils, by the hands of workmen, or in other ways. From these data we think it may be fairly argued that some bakeries from which bread is issued to the public are likely to be infected with the specific pathogenic organisms, at any rate, of typhoid fever and of phthisis.

There are two ways in which it is conceivable that a loaf might convey specific organisms capable of causing injury to consumers—viz. (1) organisms that have lodged on the crust of the loaf from surface contamination in an infected bakery; and (2) organisms that have possibly escaped destruction in the interior of the loaf during the process of baking.

1. *Organisms that have lodged on the surface of the loaf after baking.*—When taken from the oven a batch of loaves is often allowed to lie about in the bakehouse for a considerable time. It is obvious that there is every chance of contamination of the crust by the lodgment of bacteria either from the air, from the trays or shelves on which the bread is laid, or from the hands of the workmen. The fact that the baked loaf is open to infection in a dirty bakehouse seems to be overlooked by those who insist so loudly that baking sterilises the loaf. Their assumption appears to be that the loaf, once sterilised, will remain so for an indefinite time. The fallacy of this assumption, on the other hand, is recognised by some few people, who resterilise the crust by putting their loaves in a hot oven for a short while before use. We propose to deal with the whole question of the surface contamination of the baked loaf in another paper.

2. *Organisms that have possibly escaped destruction in the interior of the loaf.*—This consideration brings us to the starting-point of our investigation. It will be impossible to do more in this place than give a short summary of the numerous experiments carried out under our directions by Mr. Walter Severn at his laboratory in Bentinck-street, London.

TEMPERATURE.

In considering the likelihood of the survival of organisms in the baked loaf the question of temperature is of first importance. From a number of experiments made on loaves baked in a small laboratory oven it appears that: 1. The average maximum temperature in the middle of an ordinary quartern loaf during baking varies from 73° to 86° C. (163·4° to 186·8° F.), and in small loaves from 86° to 95° C. (186·8° to 203° F.). 2. There is a steady increase of temperature in the centre of any loaf during baking; thus, in a quartern loaf during one hour it rises from 25° to 75° C., and in a half-quartern loaf from 25° to 88° C. during the same time. The increase of fifty odd degrees (Centigrade) in the centre of an ordinary loaf is attained somewhat after the following scale:—

In the first 8 or 9 minutes about 6 degrees are gained.							
,, ,,	next	10	,,	,,	6	,,	,,
,, ,,	,,	10	,,	,,	7	,,	,,
,, ,,	,,	10	,,	,,	9	,,	,,
,, ,,	,,	10	,,	,,	12	,,	,,
,, ,,	,,	10	,,	,,	9	,,	,,
,, ,,	,,	10	,,	from 5 to 7		,,	,,

So that for the first forty minutes the maximum temperature is probably not more than 48° or 50° C. The practical inference is that any organisms that might be present in the centre of a loaf would be exposed for a short time only during baking to a maximum temperature of 73° to 86° C. (163·4° to 186·8° F.) in a quartern, and of 86° to 95° C. (186·8° to 203° F.) in a half-quartern loaf.

It is known that most bacteria are not destroyed by an exposure to the temperatures above mentioned as the average for

[1] A paper read in the Public Health Section at the meeting of the British Medical Association at Bristol on Aug. 1st, 1894.

[2] The Truth about the London Bakeries, New Review, May, 1894, p. 607.

the centre of a loaf during baking. The death point of bacteria has been generally expressed by Koch and Wolfhügel in the following passage: "1. Sporeless bacteria are destroyed in one and a half hours by hot air at a temperature slightly exceeding 100° C. (212° F.). 2. Spores of fungi require one and a half hours at 110° to 115° C. (230° to 239° F.). Spores of bacilli require three hours at 140° C. (252° F.)." It should be noted that these statements apply to dry heat only. In the middle of the loaf there is presumably moist heat, which is, of course, more destructive to organisms, and on that account we must make a considerable reduction in the figures of Koch when we apply them to fungi and their spores inside a loaf. After making ample allowance it is obvious that if the temperatures found by us in the centre of loaves be correct it will be safe to predict, on theoretical grounds alone, that bacteria and their spores need not necessarily be destroyed by baking inside a loaf.

CULTIVATIONS.

The next step was to ascertain whether ordinary bread contained organisms or their spores in a state of vitality. It is clear that even if the actual organisms were destroyed by baking, while their spores survived that process, there is nothing to prevent the subsequent development of the spores. The loaves used in the following experiments were obtained from various parts of London—such as Limehouse, Belgravia, South Kensington, Minories, and Barbican. In all cases the examinations were made within a few hours of the bread leaving the oven. 1. Direct microscopic examination yielded unsatisfactory results, and was soon abandoned in favour of cultivation methods. 2. A series of twenty loaves was examined by the method of plate cultivation in nutrient gelatine.

The plate cultures were made in two different ways. 1. By the trituration method. A loaf is cut in half with a large sterile knife, and a cut made at right angles into one of the halves by a second sterile knife. A small portion of bread taken from the deeper part of the second incision is rapidly triturated in a stoppered weighing bottle with sterile water, and from the resulting cloudy liquid plate cultures are poured. 2. By the "direct" method. A morsel of bread removed in a similar way is rapidly crumbled up, and a few crumbs are dropped into a tube of the liquefied gelatine, which is well mixed and poured out on a plate. The loaves used were as follows:—

LIST I.

A.—Limehouse.
Three ordinary (underbaked).
Two ordinary (brown outside, black in places).
One brown (fairly baked).
One tinned (underbaked).
B.—Belgravia.
Two ordinary (fairly well baked).
One tinned (fairly well baked).
One small brown tinned (well baked).
One long French roll (rather underbaked).
C.—South Kensington, No. 1.
Two ordinary (well baked).
One ordinary (rather underbaked).
One brown tinned (rather overbaked).
D.—South Kensington, No. 2.
Two ordinary (well baked).
E.—South Kensington, No. 3.
Two tinned (well baked).

In all, thirteen species of bacteria have been found in a total of sixty-two loaves examined. For convenience of reference the following table may be given:—

LIST II.

Bacteria (or their Spores) found in a Living Condition in Freshly Baked Loaves of Bread.

1. Bacillus subtilis, Variety 1 (hay bacillus).
2. Bacillus subtilis, Variety 2 (hay bacillus).
3. Bacillus subtilis, Variety 3 (hay bacillus).
4. Sarcina (a), large.
5. Sarcina (b), smaller than (a).
6. Bacillus A (large, thick, rounded ends).
7. Bacillus B (large, thick, smaller than A).
8. Bacillus C (small, copious spore formation).
9. Bacillus D (smaller still; some spore formation).
10. Bacillus E (bacillus figurans).
11. Micrococcus A (small white colonies).
12. Micrococcus B (rosaceus (?), accidental).
13. Staphylococcus (very regular, larger than staphylococcus aureus).

LIST III.

*Results of Plate Cultures.**

A.—1. First loaf, first plate; colonies, 25 (1), 8 (2), 2 (4).
First loaf, second plate; colonies much more numerous.
Second loaf, first plate; results approximately same.
Third loaf; colonies, 1 (1), 1 (10).
2. First loaf, first plate; colonies, 52 (1), 8 (2), 1 (3).
First loaf, second plate; colonies (?); liquid.
Second loaf, first plate; colonies, 6 (1).
Second loaf, second plate; colonies, over 100; much liquid.
3. 3. Colonies, 3 (1), 2 (10), 3 (8).
4. Colonies liquid, number doubtful.
B.—1. First loaf, first plate; colonies, 8 (1), 2 (13), 3 (2), 1 (3).
First loaf, second plate; colonies, 10 (1), 1 (13), 13 (2), 3 (7).
Second loaf, first plate; colonies, 1 (13), 6 (2), 20 (7), 2 (1).
Second loaf, second plate; 10 (? 1), plate destroyed.
2. Practically sterile.
3 and 4. Practically sterile.
C.—1. First loaf, first plate; colonies, 2 (6), 1 (9).
First loaf, second plate; colonies, 15 (6), 1 (9), 3 (1).
Second loaf, first plate; colonies, 2 (6), 2 (5).
Second loaf, second plate; colonies, 5 (6), 3 (9), 10 (5); large liquid area with many colonies.
2. Sterile; all but two surface colonies, and one of saccharomyces rosaceus.
3. Five surface colonies; plate remained long under bell; 1 of saccharomyces rosaceus.
4. Also practically sterile; four plates.
D.—First loaf, first plate; colonies, 1 (9), 2 (2), much liquid; could not count; one of (9)—fortunate.
First loaf, second plate; colonies, number doubtful; all liquid, (1).
Second loaf, first plate; practically sterile.
Second loaf; colonies, 1; bacillus fluorescens.
E.—All sterile, except moulds and surface accidental colonies; one of bacillus æruginosus.

* The figures in brackets refer to the foregoing list of organisms.

From all the colonies, which we may assume were derived from bacteria in the bread itself, tubes were inoculated and microscopical examinations made. We do not propose to give in detail the results of numerous other plate cultivations; it may be stated, however, that all the bacteria given in the list above have at one time or another been obtained from sixty-two loaves which have been examined by plate cultivations.

Thus far our experiments have shown that thirteen different species of micro-organisms can be cultivated from the centre of loaves within a few hours of their being taken from the baker's oven.

GENERAL REMARKS ON THE PLATE CULTIVATIONS.

Conditions of experiments.—The plates used were ordinary 5 in. by 4 in. photographic plates, carefully cleaned and sterilised at 160° to 170° C. in a box made for the purpose. The damp chambers were double dishes from Muencke of Berlin, 22 centimetres in diameter. The shelves were made in one piece of glass and were also sterilised by heat. The chambers were sterilised, not with chloride of mercury, but with carefully boiled water, as recommended by Dr. Percy Frankland. The incubation temperature varied from 18° to 25° C. (64° to 77° F.). The gelatine was made from fresh meat and peptonum siccum (Savory and Moore). It contained 10 per cent. of Coignet's gold label gelatine and 3 per cent. of pure glucose, and was faintly alkaline. The methods of culture have been described.

General results.—The following points may be noticed. 1. The comparative scarcity of colonies on the plates, which may be partly accounted for by the facts that (1) the number of bacteria capable of growing in nutrient gelatine is evidently variable even in closely adjacent parts of the same loaf; (2) in the case of cultures made by the trituration method only a few of the germs present on the morsels of bread triturated are removed by the sterile water, and only a very little of this water is used for the plate culture (in every case the quantity used has been as much as could be removed in the loop of a platinum needle 3 mm. external diameter, made from wire 0·85 c.m. diameter); (3) in the case of cultures made by the direct method probably almost the only germs that grow are those on the outside of the crumbs which come into actual contact with the gelatine; and (4) it is, of course, possible that many of the bacteria present will not develop colonies in nutrient gelatine. 2. While in the series of twelve plates from Bakery A there is a large preponderance of the bacillus subtilis, there are fewer other organisms than in the South Kensington and other West-end bakeries. We may, however, state that this is by no means always the case, as there is an evident relation between dirty dough and the number of bacteria found living in the baked loaf. This point we ascertained in the course of further experiments with artificially infected dough. These and other results must be reserved for future papers. A loaf from a low-class, dirty bakery will almost invariably contain more living bacteria (or their spores) than one from a good, clean bakery. 3. More bacteria seem to grow by the method of direct culture than by the trituration method. 4. The extremely variable results obtained, not only from bakehouse to bakehouse, but also from loaf to loaf, in the same batch. This points to the necessity of further experiments. 5. The

unexpectedly sterile condition of plates from some loaves—notably from tinned and small loaves (half-quarterns). This does not necessarily prove that a particular loaf is sterile, but only that in the parts examined no bacteria capable of growing were in contact with the gelatine. In the case of a tinned loaf the heat appears to penetrate more effectually, so far as the destruction of organisms is concerned, than in an ordinary loaf. In small loaves the temperature is higher on an average in the centre than in large loaves. 6. The organisms 8 and 9 (see List II.), or their spores, are killed with comparative ease—that is, their death point in dry heat is about the same as that of bacillus tuberculosus under certain conditions. We may therefore assume that if these organisms survive the baking the tubercle bacillus might also survive. We have other reasons for believing that pathogenic organisms often do survive the baking. 7. A further proof of the ubiquity of bacillus subtilis and of the bacilli resembling it is afforded by the frequent preponderance of those organisms in our cultures. On the whole, we are inclined to think that, notwithstanding the comparatively low temperatures reached in the centres of loaves, the conditions are such that the greater number of the bacteria present in the unbaked dough are destroyed.

Accepting the fact that certain non-pathogenic micro-organisms (or their spores) can survive the process of baking in the centre of an ordinary loaf, we argue by analogy that pathogenic forms of bacteria (and their spores) may also pass safely through a similar ordeal. Our experiments, however, have not been confined to mere cultures from bread. We have made many experiments with dough infected with pathogenic organisms, but, as the indispensable evidence, obtainable only by inoculation of living animals, is wanting, we are unable at this stage of the proceedings to publish our researches on this important point.

Enough has been said, we trust, to encourage other bacteriologists to repeat and extend our experiments. If it be proved, as we venture to think has been done, that certain non-pathogenic organisms are able to retain their vitality in the loaf as it leaves the baker's oven, the fact thus established will overthrow the last defence of insanitary bakehouses—namely, that bread is absolutely sterilised by baking, and is therefore harmless to consumers. Another important result may be deduced from the following data: (1) unwholesome bakeries are exposed to infection by pathogenic bacteria—e.g., typhoid fever in sewage; and (2) such bacteria may gain entrance to the dough and maintain their vitality after baking—by analogy with what has been shown to occur in the case of non-pathogenic bacteria. If these premisses be true, it follows that pathogenic organisms may under certain circumstances be distributed in loaves and so produce specific disease among consumers.

We see no particular reason why the origin of many mysterious septic invasions of the human body may not eventually be traced to the agency of bread. A generation ago milk was not suspected of being the means of spreading disease, and a similar observation applies to water. At any rate, the subject dealt with in this paper seems to us to be well worthy the attention of all who are interested in the scientific developments of preventive medicine, no less than in the protection of the public that consumes the bread.

THE PATHOLOGY OF ENLARGEMENT OF THE PROSTATE.

BY C. MANSELL MOULLIN, M.D. OXON., F.R.C.S. ENG.

THERE are three very different views current at the present day with regard to the pathology of enlargement of the prostate. One is based upon a supposed analogy between it and fibroid disease of the uterus. This was first suggested by Velpeau, and is supported by Sir H. Thompson and Professor White of Philadelphia. According to another, enlargement of the prostate is merely one of the occurrences in a constitutional disorder that begins as arterial sclerosis and ends in fibroid degeneration, affecting the genito-urinary organs in an especial manner. This has the support of Guyon, and, following him, of the whole French school. The third has been suggested by Mr. Reginald Harrison, who holds that the primary change is in the bladder, and that the enlargement is secondary to it and developed as a compensatory measure. None of these views can be considered satisfactory. The first is negatived entirely by the facts of development. The homologue of the uterus is not the prostate, but the prostatic utricle, an entirely independent structure, which is included in the prostate gland merely by an accident of growth, and which has never been shown to take the least active share either in tumour formation or in general enlargement of the prostate gland. The homologue of the prostate, if it exists at all in the opposite sex, is to be found in the tissues of the perineum or near the lower ends of the ducts of Gärtner—nowhere near the uterus. Nor is it supported by histology. Uterine growths originate as fibro-myomata. They have little or nothing to do with the mucous membrane or the glands that it contains. Enlargement of the prostate, on the other hand, is glandular from the first; it begins and spreads as an adenomatous growth, and even the rounded masses that it contains originate, with few exceptions, in the glandular tissue. Both organs, it is true, contain unstriped muscular fibre (although the proportion in which this is present in each and the arrangements and uses are entirely different), and the growths that originate in each of them resemble one another to a certain extent in shape (they are usually rounded) and in their anatomical relations (sometimes they are encapsuled, sometimes they assume a polypoid form); but these peculiarities are by no means confined to these organs or their growths. Unstriped muscular fibre occurs in abundance elsewhere. Rounded encapsuled masses that shell out when they are exposed by section are by no means rare in fibrosarcomata; and tumours, when they project into the cavities of other viscera, not infrequently become polypoid in shape. That these two organs, uterus and prostate, should both be liable to tumour formation and enlargement during the latter half of the reproductive period, when the first flush of full sexual activity is over, is a fact of great significance in many ways; but it is scarcely sufficient in itself to recommend the adoption of this theory even provisionally.

Guyon's hypothesis is still less tenable. It is true, as Sir Benjamin Brodie has pointed out, that enlargement of the prostate and atheroma frequently occur together; the time of life at which they are both most common is the same; but this does not show in the least degree that the one is the cause of the other. Enlargement of the prostate does not begin as fibroid degeneration but as glandular overgrowth. Arterial sclerosis and passive congestion may do a great deal, but they cannot cause this, and still less can they cause the growth of masses that sometimes almost fill the lower part of the bladder. Moreover, enlargement of the prostate is compatible with perfect health, continuing sometimes even to extreme old age without its existence being so much as suspected. Those who suffer from urinary troubles form but a small proportion of those in whom enlargement occurs. The vast majority are free, and, although some may be atheromatous, many live on with no evidence of vascular degeneration other than that which is the normal companion of healthy old age.

There is even less to be said in favour of the view that the primary change is in the bladder and that the enlargement is a compensatory contrivance. The prostate, both as regards its glandular substance and its stroma, is of sexual origin, and has to deal only with sexual functions. It develops with the testes and atrophies if they are removed. It has nothing to do with micturition, which, if the prostate remains undeveloped or undergoes atrophy, takes place just as well as it does if the prostate is normal. Nor is there any evidence that the sinking of the posterior part of the bladder is a primary change, or that when it does sink the prostate enlarges in compensation. This can only be imagined so long as the erect position is maintained and the prostate bears the same relation to the bladder that it does in man; whereas enlargement takes place in dogs and other quadrupeds, in which the anatomical relations are entirely different. Nor is it easy to understand why compensation for sinking of the posterior wall of the bladder is confined to one sex.

None of these theories, therefore, can be considered as offering a satisfactory explanation. There are, however, certain facts, some long since known and almost forgotten, and others of recent discovery, that suggest that the real cause is to be found in another direction. The enlargement is in some way dependent upon the testes. The evidence in favour of this is briefly as follows. The normal development

of the prostate is undoubtedly controlled by that of the testes. Up to puberty there is no prostate worth mentioning. If castration is performed before puberty the prostate never grows; if after puberty it wastes and disappears, and the same has now been shown to be true of the abnormal development known as enlargement. This rarely begins after an age at which it may be presumed that the testes are no longer functional (Sir H. Thompson and Sir G. Humphry), and it disappears if they are removed. There are now nine cases on record, in which castration has been followed by complete disappearance of the enlargement within a very few weeks, every single case in which any note as to the condition of the prostate has been taken.[1] There can, therefore, be no question that in some way or other the condition of the testes controls that of the prostate both in its normal and enlarged form.

In this relation between the prostate and the testes there is a very close parallel to that which exists between the ovaries and the uterus. Nor is this surprising. The testes in the one sex are the dominant organs in the sexual system, and the ovaries in the other. The influence that each exerts upon the other (secondary) sexual organs is closely similar, and, perhaps, identical; but this must not be taken as showing that any closer homology exists between the prostate and the uterus (or between prostatic enlargement and fibroid disease) than that which exists between the testes and the ovaries. In what way the testes exert this influence upon the prostate so as to cause it to enlarge must remain at present a matter for speculation. The mere induction of sterility—as, for example, by section of the vasa deferentia—although it may be followed by wasting of the testes, does not appear to be sufficient.[2] The influence, whatever it is, comes from the testes themselves, and it exists so long as the testes are present. (It is to be noted that although enlargement of the prostate rarely commences late in life, presumably because at that time the testes are no longer active, their loss of functional activity does not induce atrophy of an already enlarged gland.) It may be exerted through the agency of the nervous system, or—as there is little or no proof that the nervous system has any direct control over normal and much less over pathological growth—through that of the circulation. Evidence is slowly accumulating that the nutrition of distant parts of the body is in some instances dependent upon the integrity of organs with which at first sight they appear to have no connexion. Affections of the thyroid gland, for example, rendering it deficient in some unknown substance, can produce the most profound structural alterations throughout the body. It is believed, on experimental evidence, that the pancreas may have duties in connexion with general nutrition entirely independent of its secreting action. There is reason to think that the condition of the ovaries has some influence in connexion with mollities ossium; there are, at any rate, many cases on record in which the removal of these organs is stated to have been followed by recovery from this otherwise almost universally progressive disease. And though there is as yet no proof that morbid states of the testes (as distinguished from simple atrophy or removal) can induce changes in secondary sexual characters, this is undoubtedly true of the ovaries, as, for instance, the assumption of the male plumage by the females of various birds when the ovary is diseased.

If this suggestion that enlargement of the prostate is dependent upon some change that takes place in the testes during the latter part of their active life should be accepted—and certain facts point strongly in its favour—it is a curious instance of the way in which modern views are sometimes foreshadowed by the speculative theories of a long past date.

Note.—Since the above was written cases have been published by Watson of Boston and Lannois in which unilateral atrophy of the prostate has followed removal of one of the testes. If this can be established by post-mortem examination it may be taken as proof that the agency through which the influence of the testes is exerted upon the prostate is the nervous system and not the circulation.

Wimpole-street, W.

[1] Ramm of Christiania, Centralblatt für Chirurgie, No. 35, Sept. 2nd, 1893, and No. 17, April 28th, 1894; Arthur Powell, Brit. Med. Jour., Nov. 18th, 1893; Professor White of Philadelphia, Brit. Med. Jour., June 23rd, 1894; Mansell Moullin, Brit. Med. Ass., Aug. 1894; and the following quoted by Professor White: Haynes of Los Angelos, California, Buffalo Med. and Surg. Jour., March, 1894, and Fremont Smith of St. Augustine, Florida, New York Academy of Medicine, 1894.

[2] Griffiths, Brit. Med. Jour., Sept. 30th, 1893, and Haynes, loc. cit.

A SUCCESSFUL CASE OF ENTERECTOMY WITH THE USE OF MURPHY'S BUTTON.

BY PAUL SWAIN, F.R.C.S. ENG.,
SURGEON TO THE SOUTH DEVON AND EAST CORNWALL HOSPITAL.

ATTENTION has recently been drawn in THE LANCET[1] to the use of Murphy's button in intestinal resections. The following case I venture to report at some length, as the use of the button by English surgeons has not hitherto, so far as I am aware, been extensive. In October, 1889, I was asked by Messrs. Chubb and Vinter of Torpoint to see a lad who had received a severe injury by falling under the prow of the steam ferry. The principal lesion was abdominal, and resulted in acute peritonitis, from which the boy recovered after a prolonged illness. I saw him some little time afterwards, when he was suffering from fæcal impaction, and it was only after many days' use of injections and other remedies that his bowels were "cleared out." In the middle of September of this year I was again asked to see him, and the following history was obtained. His age was fifteen. Ever since the accident he had suffered from periodical attacks of violent abdominal pain, accompanied with great distension and violent vomiting, which on occasions had become fæcal. The attacks commenced after some constipation and terminated in violent diarrhœa. Their frequency had of late increased, recurring sometimes twice a week. When I saw him he had just passed through one of these attacks. His abdomen was much distended but not tender. There was dulness on percussion over the cæcum and ascending colon. The countenance was pinched and anxious. My diagnosis was that, as the result of the peritonitis, he had some constricting band, and my advice was that an operation should be performed for his relief. He was consequently admitted into the Private Home for Patients at Plymouth, and on Sept. 27th I opened his abdomen. On passing my hand down into the right iliac fossa I found collapsed bowel and a broad band descending into the pelvis. The small intestine above this was enormously dilated, the circumference of the bowel being in some parts from twelve to fifteen inches. The constricting band was divided, but the intestines were glued together to such an extent that I had very considerable difficulty in separating the adhesions, as many as twenty pressure forceps being on at once. When I was able to draw out the part it was found that a dense stricture existed, through which it was nearly impossible to pass on the contents of the upper bowel. During the attempt to do so a small leak was detected at the point of stricture. It was at once decided to remove the constricted portion of the bowel. An elastic ligature was placed above and below this point and about five inches of gut were removed. The contents of the upper bowel were emptied as far as possible; it contained a large number of cherry and plum stones. The intestine was reunited with Murphy's button. A description of the method is fully given in the article alluded to above. The actual excision of the stricture and the reunion of the gut did not occupy ten minutes. During the night the patient was sick several times, and about midnight he became rather collapsed. He was fed per rectum every four hours with beef-tea and brandy. On Sept. 28th he was very quiet and was not in pain. The temperature was 98·4° F. in the morning and 99° in the evening. He was fed by the mouth every hour with small quantities of peptonised milk-and-water (equal parts), with an occasional nutrient enema. On the 29th he was comfortable. He passed flatus freely by the rectum. The temperature was 99·6° in the morning and 99° in the evening. The milk-and-water was continued in increased quantity. On the 30th he passed a dark liquid motion on three occasions. On Oct. 1st the bowels were opened; the resulting evacuation contained three orange pips. On the 2nd he passed an offensive motion containing milk curds and orange pips. On the 4th the silkworm gut sutures were removed; the abdominal wound had healed. On the 6th there had been no motion for three days. A large quantity of fæces was felt in the rectum. A simple enema produced a hard, lumpy evacuation. On the 7th he passed a loose motion containing a cherry stone, and another containing a plum stone on the following day after an injection. On the 10th, after an enema, he passed a large motion containing the button, nine

[1] THE LANCET, Sept. 15th, 1894.

plum stones, and three cherry stones. The button was coated with fæces and the tube was blocked by a cherry stone. On the 11th the patient was quite convalescent. He was allowed to get up and take fish and chicken.

Remarks.—The above case is in itself a very interesting one, but its importance principally consists as a record of the successful use of Murphy's button. The great objection to all intestinal resection is the length of time spent in securely suturing the ends of the gut. I was surprised at the facility with which the operation was performed. I was only familiar with the use of the button from the description I had read; and yet I found the reunion of the gut a very easy process. The adaptation of the serous surfaces was so perfect that it was with entire confidence that I returned the bowel into the abdominal cavity. Another point worthy of notice is this: the disparity in the circumference of the bowel above and below the stricture was so great that by the ordinary method of suture very considerable difficulty would have been experienced; but with the button all trouble of this kind was removed.

The Crescent, Plymouth.

YAWS IN BORNEO, NOT CONNECTED WITH SYPHILIS.

BY SURGEON-CAPTAIN F. SMITH, A.M.S.

HAVING recently met with cases of framboesia in North Borneo which are not mentioned by some of the latest writers on the geographical distribution of the disease, it appeared to me desirable to report them, especially as they seem to throw some light on the question of the relation of yaws to syphilis. While travelling on foot through the jungle I came across a hut belonging to a man of the Dusun tribe. This house stands alone, miles from any other habitation, and the inhabitants have so little intercourse with coast people that they were quite alarmed when told that it was proposed to make a road which would pass their dwelling. The head of the house said, "In that case we must seek a home further away in the woods." The family consisted of father, mother, five children (one at the breast) and a son-in-law. Children Nos. 3 and 4 presented a shocking appearance. At first sight they certainly looked as if they were suffering from severe constitutional syphilis of an uncommon type, but a closer inspection quickly dispelled the idea. My companion, who has lived long in the country and is not a medical man, informed me that the disease was known to him as soft cancer. The best description I can give of the sores is that they were exactly like enormous condylomata, some of them with ulcerating surfaces, others more or less scabbed. A few tubercles had broken down and left ulcers. On one child (eight years of age) the face and neck were affected, and, more sparsely, the arms and legs. The other child (five years of age) was covered with tubercles, more particularly about the genitals and buttocks, where some of them were as big as walnuts and presented a mass of such density that the skin was hidden and the vulvar opening, the gluteal folds, and cleft between the buttocks could not be made out. The mouth was so surrounded that the child ate with difficulty. This condition of affairs was aggravated by the filthy condition in which the sufferers were kept. The next in age, a boy, was said to have recently had the disease, but was a healthy-looking, robust lad when we saw him. He bore scars around the mouth and on various parts of the body. The eldest daughter and the youngest were healthy, as were the father, mother, and son-in-law. The parents were not much concerned about the sickness; they said it was a common disease and would get well of itself, and the children be as strong as their brother who had got over it. I had no opportunity of seeing them again. The Dusuns are familiar with yaws, but syphilis is practically unknown among them. In this instance the father and mother were in good health and there were healthy children older and younger than those affected. Both the father and mother stated that there had been no miscarriages; all the children were alive at the time we visited the place, and they show a regular sequence in point of age (two, five, eight, eleven, and fourteen years). Lactation is prolonged among these people. There were no signs of syphilis to be found in the eyes or teeth of any of the family. The diseased children had no sores inside the mouth or on the hairy scalp, and no evidence of bone affections or periostitis—nothing but the eruption. It is not likely that syphilis would present exactly the same appearances in three children, and in two of them at one time. Syphilis severe enough to have produced such a condition as was present in these cases would have caused serious constitutional disturbance, but the two Dusun children sprang up when we approached; they took a lively interest in us and in some biscuits which we gave them, and they moved about briskly, though their gait was interfered with by their sores. The Dusuns have no idea of the cause of yaws, but they know it to be contagious. These cases do not absolutely prove anything, but I think they may help to elucidate matters. I am sure that no unbiased person who saw this family as I did could doubt that yaws and syphilis are totally distinct diseases. I have not met with the disease in Malaya—that is, British Malaya—but should imagine that cases will be found in the interior, inasmuch as the disease is said to be prevalent in the neighbouring Dutch possessions, as Java, Sumatra, &c.

Singapore, Malaya.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CURIOUS FŒTAL DEFORMITY.

BY L. E. STEVENSON, M.B., B.C. CANTAB.

ON Oct. 11th of this year I was called to attend a woman aged twenty-six, multipara. The previous labours, four in number, had been normal. The patient's abdomen was of unusual size, and I found a large bag of membranes protruding through the os during the pains. This I ruptured, and an enormous quantity of liquor amnii flowed away. I could feel the head presenting very high up. There was long delay at the brim, and when the os was sufficiently dilated I applied the forceps, but they slipped off twice. After waiting an hour the head advanced and was then discovered to be hydrocephalic. I at length succeeded in extracting the fœtus with the forceps without perforating the head. The fœtus was a male and only lived three or four minutes. On further examination later I found the vertebral column so bent and twisted on itself that the anal aperture, though in the median line, was only two inches distant from the base of the skull posteriorly, the pelvis being so tilted that the legs appeared to be growing from the child's back. The umbilical insertion of the cord was greatly dilated, measuring an inch by an inch and a half, there being a corresponding deficiency of the abdominal wall. The anterior parts of the neck were filled in, almost to the level of the chin, by fatty subcutaneous tissue. All the limbs were normal, with the exception of the right leg, the foot of which showed well-marked congenital talipes varus.

Temple Sowerby, Penrith.

CASE OF CONGENITAL HYDRONEPHROSIS TREATED SUCCESSFULLY BY A NOVEL METHOD.

BY W. ARBUTHNOT LANE, M.S. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON TO GUY'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

A BOY fourteen years old, small for his age, being about 4 ft. 6 in. in height, was first attacked by hydronephrosis on the left side in 1885. There was considerable distension of the abdomen, the tumour subsiding spontaneously at the end of four or five weeks. After this he had four or five attacks, each lasting about three or four weeks and then disappearing suddenly. In September, 1893, as he was very much distended, he was tapped by Dr. Freeman of Kimpton, and eighty-four ounces of fluid were drawn off. This quantity did not represent the whole of the fluid contents of the tumour. The abdomen being again enormously distended, on October 11th, 1893, he was tapped by Mr. Bernard Scott of Bournemouth, who drew off two gallons of fluid. Before he was tapped his abdomen measured

thirty-eight inches in circumference, the apex of the heart beating in the second space, and the distension caused him the greatest distress. A drainage-tube was left in, through which a considerable quantity of urine drained daily into a vessel arranged for the purpose. The abundant discharge of urine through the fistulous opening was the factor that determined the parents in desiring the removal of the tumour, and the operation was therefore performed on Feb. 27th, 1894. On exposing the outer aspect of the tumour by means of an incision in the left side, and on laying it open, the hand entered a cavity of such considerable size that it was felt to be undesirable to incur what would have been a very considerable risk by its removal, especially as the wound might possibly not be aseptic. I therefore examined the exposed portion of the tumour to discover how far the mass was made up of distended pelvis and ureter, and how much of dilated kidney substance. This I arrived at by stripping off the capsule from what was obviously renal tissue, when it was found that about a tenth only of the wall of the cyst was formed of kidney substance, the remainder being apparently made up of the pelvis and ureter enormously dilated. The kidney was carefully cut away along its limits, which were readily indicated by the reflection of its capsule, each portion being firmly ligatured previously to being cut through. The ligatures were left long so as to serve as a drain from the remainder of the cyst-wall left. At no time after the operation did any discharge of urine take place from the wound, which was kept open only by the ligatures, which came away after varying intervals of time.

St. Thomas's-street, S.E.

AN ANTISEPTIC ALKALINE TABLOID FOR NASO-PHARYNGEAL DISEASES.

BY HERBERT TILLEY, M.D., B.S. LOND., &c.,
ASSISTANT SURGEON TO THE LONDON EAR AND THROAT HOSPITAL.

HAVING had more than twelve months' experience with the tabloid about to be described, I can confidently recommend it to the profession for use in those cases of naso-pharyngeal diseases where an alkaline antiseptic wash is advisable—such cases, for example, as ozæna, chronic nasal catarrh, and purulent discharges from the accessory nasal cavities after removal of polypi, &c. The obvious difficulty was to combine the carbolic acid and sodium bicarbonate; but after much trouble Messrs. Burroughs and Wellcome succeeded in doing so, and the convenience of the tabloid to patients suffering from diseases similar to those described is inestimable. There is nothing new in the combination of drugs employed, as is seen at once in its composition—viz., twelve grains of bicarbonate of sodium, a grain and a half of carbolic acid, and two grains of chloride of sodium. I purposely excluded borax, because I shared the experience of some other rhinologists that many patients complain of a sense of dryness in their nose when using lotions containing borax, which disappeared when the latter drug was eliminated from the lotion. The second and most obvious advantage is that of expense to the patient. Many have to continue using lotions for a long while, and the necessity of having a fresh supply every fifth or sixth day often results in patients giving up a treatment which would much benefit them if continued. The tabloids are very soluble in water, and, indeed, are so hygroscopic that they should be kept well corked. One tabloid dissolved in about two ounces of lukewarm water gives a solution of sufficient strength for ordinary cases, but the suitable strength can soon be best gauged by the patient himself. A bottle containing 100 tabloids is sold for about 2*s.* and in an ordinary way would last about two months. Such a combination of drugs is so commonly ordered in naso-pharyngeal cases that its convenience in this form is my reason for bringing it to notice.

College-crescent, South Hampstead, N.W.

BLACKPOOL HOSPITAL.—The trustees of this hospital have received through Dr. Kingsbury, the consulting physician, the following donations:—Anonymous (to build two additional wards), £1000; Mr. James Parrott (to endow one bed in perpetuity), £1000; Miss Haworth, £250; Mr. James Higgin, £100.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A SERIES OF CASES ILLUSTRATING THE SUCCESS ATTENDING THE MODERN METHOD OF OPERATION FOR STRANGULATED HERNIA.

(Concluded from p. 853.)

(Cases under the care of Mr. W. H. BATTLE.)

THESE four cases of operation for strangulated hernia are a continuation of the series of which we published seven in the last issue of THE LANCET. We consider that they form a very good illustration of the success of the modern method of herniotomy, as they are not selected cases, but represent all herniæ which required operation during a period of ten days at one hospital. There is nothing unusual in the methods employed; probably the same cases would have been treated with equal success at any of our large hospitals. None of them presented the more serious conditions which militate against successful operation; there were no cases of gangrene, or ulceration of gut, or of adhesion of intestine to the sac. In all, with one exception, the condition permitted of the performance of a radical cure after reduction of the hernia. In order that a patient may have the best chance afforded by the modern operation, it is necessary that operation should be performed early and that attempts at taxis have not been too severe or too prolonged. This fact is emphasised by the recently published paper by Mr. John Croft, the majority of whose cases were drawn from the district from which these came. Of forty-four operations for strangulated hernia performed by him with antiseptic precautions nine died exhausted as a result of their protracted sufferings, while five were already moribund when admitted. We hope the series now published may be taken as an indication that recognition of the importance of early operative relief or the failure of moderate taxis is better appreciated that it was amongst those who see the patients first. At all events, we would impress on the profession the fact that the mortality from strangulated hernia has no right to be so high as 35·8 per cent., as was recently estimated to be the average at a large hospital. When our students are fully impressed with the importance and safety of early operation it will not be long before the public recognises it. So many operations have been performed in the past on patients who have died soon afterwards that there is still trouble to make friends understand that it is not the operation that kills but its performance on an exhausted patient. The immensely important points in these cases are evident on reading the account. We would, however, draw attention to the rarity of interstitial hernia (forming 0·13 per cent. of all cases of inguinal hernia in the male), of which Case 8 is a good example of the more usual of the three varieties into which they are divided; and to the effect of taxis in Case 9, the local effect of ice on the contents of the sac, and to the temporary albuminuria of unexplained origin. In Case 10 the patient was a stout man, who complained of no cough or illness before admission, but was probably alcoholic. How far the ether may have acted in arousing a latent tuberculous focus it is not possible to say. Without actual examination of the sac and its contents it was hardly possible to tell for certain that the hernia was a direct one. The great similarity of the two herniæ, their shape, and the fact that they did not enter the scrotum, together with their short duration, made it probable. The gut was evidently sharply nipped in Case 11, for the patient suffered much more pain than usual, and after the relief of strangulation there was a complaint of abdominal pain and discomfort, only relieved by the passage of the long tube and

the administration of a simple enema. For the abstract of the notes of these cases we are indebted to Mr. Henry A. Dickson, house surgeon.

CASE 8. *Strangulated interstitial congenital hernia.*—A man aged twenty-nine years was admitted into St. Thomas's Hospital on Sept. 18th last. He had had a hernia on the left side for eight years, for which he had worn a truss. This was discontinued two years ago, but the hernia had not caused any trouble. He said that it came down again in the morning of Sept. 17th. He vomited in the middle of the day and again in the evening. He suffered a good deal of pain that evening and throughout the night. His bowels were last opened on Sept. 16th. On admission to hospital there was seen to be a soft elastic projection at the external ring which could easily be pushed up into a larger one occupying the inguinal canal. The swelling was about the shape of half an orange, and extended beyond the internal ring to the left, and measured about four inches from above downwards. The testis, which had never been in its proper position, could be felt as a small, soft body a third the size of the right one in the lower part of the wall of the swelling, which appeared to contain fluid. Some impulse could be felt on coughing, but was only conveyed from the abdominal wall. From the history and examination it was supposed that there was probably a small piece of intestine strangulated in the upper part of the sac. The temperature was 100·2° F. At the operation it was found that the sac was situated in the abdominal wall, under the external oblique, it contained a large quantity of inflammatory fluid, and coming through the internal ring, which was in the posterior wall of the sac, was a small piece of congested gut nipped by the neck of the sac. The constriction was divided, and the gut examined and put back. Some ounces of fluid of inflammatory origin escaped from the abdomen after the gut was returned. In order to get at the internal ring and dissect out the sac it was necessary to divide the external oblique muscle along the whole length of the inguinal canal. The sac and testis were removed, separate ligatures being applied to the neck of the sac and the cord. The conjoined tendon was approximated to Poupart's ligament by two silk sutures, the external oblique sutured so as to close the external ring and inguinal canal, and superficial sutures placed in the skin. The man recovered without a bad symptom, and when he left the hospital the parts were quite firm and there was no abnormal impulse on coughing.

CASE 9. *Large strangulated scrotal hernia.*—A man aged fifty-five years was admitted to St. Thomas's Hospital on Sept. 18th. He had suffered from a right inguinal hernia for ten years, for which he had worn a truss. He had been always able to reduce it until the 17th. In the evening of that day he had pain in the abdomen and vomiting. His bowels acted three times during the day, the result of a pill taken the previous evening. The sickness continued all night, and next morning he was seen by a medical man, who made unsuccessful attempts to reduce the hernia for a period of four hours. On admission to hospital the same evening there was a scrotal hernia the size of a large cocoanut, tense, devoid of impulse, tympanitic on percussion, and with a large neck. The skin over it was red and it was tender on manipulation; there was also a little bluish discolouration in parts. An ice-bag was applied; no vomiting took place after his admission, but there was no improvement in the hernia after two hours, so the patient was placed under ether and the sac opened by means of a long incision. The omentum was found adherent to the sac under the incision, and it was somewhat difficult to get to the side of this. The sac also contained about three feet of congested small intestine and some blood-stained fluid. The omentum was ligatured in sections just below the level of the internal ring, where it was not adherent, and divided. The intestine was returned, and then the sac dissected out with the adherent omentum, ligatured at the neck, and removed. There had evidently been an old-standing, irreducible omental hernia, the adhesions being very firm and the omentum hard and lumpy. The intestine contained in the hernia had a markedly cold feel, the result of the application of the ice. It was found that there was a recent rupture of the sac extending from the bottom up to the internal ring; there was also a small recent laceration of the mesentery with some bruising. The wound and deeper parts were closed with silk sutures after the method recommended by Mr. Banks. For a few days after the operation the urine contained a third of albumen, but it then disappeared. A week after the operation frequent "teasing" actions of the bowel caused much discomfort, but this attack was relieved by a starch-and-opium enema. Some shock followed the operation, and he appeared to rally slowly at first. There were, however, no local complications, and when he left the hospital on Oct. 8th the bed of the hernia was occupied by a thick, firm band of tissue. There was no trace of hernia, and the albuminuria had quite disappeared.

CASE 10. *Strangulated direct hernia.*—A rather stout man aged forty-seven years was admitted to St. Thomas's Hospital on Sept. 19th. He had suffered from hernia on both sides since January of this year, and wore a double truss until Sept. 18th, when he thought he could do without it and discontinued its use. During the day the hernia on the left side descended and became larger and hard. His bowels had acted naturally in the morning. During the following night he vomited. Taxis was tried unsuccessfully in the morning of the 19th, and he was sent to the hospital in the evening. He was then found to have two hernial protrusions in the inguinal regions, neither of which descended into the scrotum, of globular shape, the size of a small fist. Of these the left was the larger, irreducible, tender, and without impulse; the right was reducible and with marked impulse on coughing; it passed almost directly backwards. He vomited immediately after taking some milk. Ether was administered in the usual manner and an operation performed on the left side. The sac contained a considerable quantity of fluid already coagulated, and some dark-coloured small intestine, the wall of which was thickened and slightly adherent to the sac by recent lymph. The stricture was at the neck of the sac. After reduction of the gut excision of the sac after ligature of the neck was done, and the opening closed by two silk sutures passed through the conjoined tendon and Poupart's ligament, behind the cord. The neck of the sac was about half an inch from the internal ring, through which the cord was traced. The deep epigastric artery could not be felt. No drainage-tube was used. The wound healed without any local complication. There were occasional rises of temperature soon after operation to 100° and 101° F. in the evening, and it was found on examination for the cause of this that he had signs of consolidation at the apex. He was able to leave the hospital on Oct. 13th, but suffered from cough and was becoming emaciated.

CASE 11. *Strangulated femoral hernia.*—A married woman aged forty years was admitted to St. Thomas's Hospital on Sept. 21st. She had suffered from a left femoral hernia for five months, and had worn a truss. On the 17th the hernia came down and she was unable to reduce it, but it caused her no pain or discomfort. On the 20th it got larger and became painful, and her bowels acted twice during the day. She vomited in the morning of admission, and again at 7 P.M. There was a small tense femoral hernia, resonant on percussion, without impulse on coughing, and very tender on manipulation. She complained of great pain all over the abdomen. She did not vomit again before the operation. The usual incision was made down to the sac, and as it was being pulled down to better permit of the division of some fibres about the neck the contents slipped back. The sac was then opened, proved to be empty, ligatured at the neck, and removed. The wound was closed without a drainage-tube. On the third day she had some commencing distension about the abdomen, and complained of pain, but these symptoms rapidly subsided after the passing of a long tube into the rectum. There were no further symptoms, and she was permitted to leave the hospital in a fortnight.

Two other patients, boys aged two years and ten months and two years respectively, were admitted to St. Thomas's Hospital on Sept. 22nd, the former being the child of the patient in Case 8. In both the hernia was on the right side; both suffered from phimosis. In the elder child the symptoms were those of strangulation in the other the hernia had been down for eleven days without symptoms. Both herniæ resisted taxis, but went back a few hours after a warm bath, followed by the application of an ice-bag. Circumcision was performed in one case. Trusses were fitted before the patients left the hospital.

LEITH HOSPITAL.

FRACTURE OF THE BASE OF THE SKULL; RUPTURE OF THE INTERNAL CAROTID ARTERY; NECROPSY.

(Under the care of Dr. J. W. STENHOUSE.)

THE following case is of interest on account of the rarity of the condition. One other case has been recorded of a

somewhat similar kind by Dr. Guthrie.[1] "I have even seen the fracture pass across the canal in the temporal bone for the passage of the carotid artery and the extravasation caused by its rupture—a fact which has been noticed by Bohn."

A woman aged seventy years, a chronic alcoholic, was admitted into Leith Hospital on May 27th, 1894, in a comatose condition. The history was that she was in a drunken state on the preceding evening, and while ascending a narrow winding stone staircase she fell backwards on to the left side of her head. She was picked up immediately afterwards by her husband in a perfectly unconscious condition. Her eyes were closed, her breathing was stertorous, and she made no voluntary movements. The condition remained unaltered up to the time of her admission to hospital twelve hours afterwards. On admission the patient was comatose. Her eyelids were closed. On opening the lids both eyes were seen to be divergent. The left pupil was pin-pointed, and the right moderately contracted. Neither reacted to light. There was a bruise on the left side of the head above the zygoma, and the left eyelid was ecchymosed. Some small clots were found in the anterior nares and nasopharynx, which seemed to indicate that some bleeding had occurred into the nose. She lay on her back with her mouth open, but on closing the jaws the cheeks flapped backwards and forwards with respiration. Her arms and legs were limp, but the knee-jerk was not abolished. The respiration was 28 per minute, regular and slightly stertorous; the pulse was 68 per minute, irregular in time and force, with medium volume; the temperature was 98·4° F. The patient lived until 6.30 P.M. on May 30th, almost four days after the accident. During that time her condition scarcely changed. The left pupil became less pin-pointed on the 28th, but on the 29th it again became pin-pointed and remained so until death. Urine was passed into the bed, while the bowels were never moved. The temperature rose steadily from 98° in the morning of the 27th to 102° in the morning of the 28th, reaching 105·6° in the evening of the 30th. There were slight falls in the temperature in the evenings of the 28th and 29th. The post-mortem examination took place on May 31st. On reflecting the scalp an ecchymosis was observed over the left side of the head as described above. On removing the calvaria there was no clot outside the dura mater. The dura mater being incised and stripped, an extensive blood-clot was found to cover the whole of the upper surface of the right hemisphere. No clot was seen on the upper surface of the left hemisphere, but the membranes were milky and opaque. Having removed the brain, the clot was seen to extend into the right Sylvian fissure and over the whole of the anterior and middle fossæ of the skull—i.e., as well on the left side as on the right. A very small clot passed down in front of the pons and medulla. The right cerebral hemisphere was much compressed, and the convolutions were flattened. On section a clot the size of a large pea was found in the substance of the pons. The right internal carotid artery, as it passed to the inner side of the cavernous sinus, was ruptured. The rupture was on the outer side, in the long axis of the vessel, and about three-eighths of an inch long. The dura mater at the base was next removed, and a fracture passing right across the sphenoid was exposed. Beginning on the left side, at the level of the lesser wing of the sphenoid and in front of the groove for the middle meningeal artery, it passed transversely inwards for about an inch, and then took a direction backwards and inwards towards the carotid canal, passing in its course between the foramen rotundum in front and the foramen ovale behind. The fracture passed across the canal to its inner side, clipping off the posterior clinoid processes. On the right side it passed transversely from these processes across the great wing of the sphenoid, posterior to the groove of the middle meningeal artery, to about the same level as on the opposite side.

Dr. W. M. Selby assisted at the necropsy.

[1] Head Injuries, p. 73.

LITERARY INTELLIGENCE.—The third volume of Stevenson and Murphy's "Treatise on Hygiene and Public Health" is announced by Messrs. J. and A. Churchill for appearance next week. The articles in this portion of the work have been written anonymously, but it is well understood that they are all the work of gentlemen of recognised legal ability, each of whom is officially engaged in the administration of the law of that part of the United Kingdom to which his article relates.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Intracranial Aneurysm.—Acute Pancreatitis.—Fatal Form of Tetany associated with Chronic Dilatation of the Stomach.—Tuberculous Lymphangitis following Inoculation of the Finger.

THE first ordinary meeting of this Society for the present session was held on Oct. 12th, Mr. HULKE, President, being in the chair.

Dr. ROSE BRADFORD read notes of a case of Intracranial Aneurysm. The patient, a man aged twenty-nine, was admitted to University College Hospital at 8 P.M. on Feb. 3rd, 1894. During the last six months he had suffered from giddiness and noises in the head, and for the last fortnight had complained of occipital headache and stiffness of the muscles of the neck. On the morning of Feb. 2nd he was seized with vomiting after eating some bacon that was thought by him to be rancid, and during the day his wife thought he had a fit, but no convulsions were seen. His pulse was intermittent. The next day the patient was better, the vomiting had ceased, the pulse was still intermittent, headache was still present, and the patient was conscious and perfectly rational. He was removed to hospital at 7 P.M., owing to retention of urine. On admission he was partially unconscious, with the axillary temperature 98° F. and the pulse 70, irregular, and intermittent. There was no paralysis. Respiration was regular. The abdomen was not retracted. The pupils were equal and medium-sized, with the deep reflexes increased. The patient was rather restless. At 9 P.M. he became comatose, and the respirations became infrequent, ceasing at 10 P.M. Artificial respiration was kept up for four hours, but the pulse then failed, and on the cessation of artificial respiration the patient died at 2.10 A.M. The temperature at midnight was 97°. No convulsions occurred. The post-mortem examination showed numerous gummata in the liver and a fusiform aneurysm of the basilar artery, which had ruptured, the extravasation forming a blood clot a quarter of an inch thick on the under surface of the pons and medulla, and extending round the sides of the medulla into the fourth ventricle.

Dr. HALE WHITE read notes of two cases of Intracranial Aneurysm in Young Subjects unaffected with Syphilis or Malignant Endocarditis. The first case was that of a woman aged thirty-four who, while at dinner on Dec. 25th, 1893, suddenly fell off her chair insensible. On coming round she had intense headache and vomiting. The pulse was slow, and the temperature 100·4° F. On Dec. 30th the patient was suffering from retraction of the head and great pain down the spine. On Jan. 7th the symptoms were as before, with complete paralysis of the left third nerve. On the 15th she had a fit. On the 18th she suddenly became worse and died in ten minutes. The whole body was perfectly healthy, except that there was an aneurysm which sprang from the left internal carotid artery just before its termination. It pressed on the left third nerve. There was a large amount of clot on the under surface of the brain; it extended to the fourth ventricle and was one-eighth of an inch thick all down the spinal canal in the subarachnoid space. The second case was that of a man who for a few weeks had complained of right frontal headache. On Jan. 23rd, 1894, he suddenly fell down insensible and was then brought to the hospital. On admission he was unconscious, the pupils were fixed and dilated, and the eyeballs were prominent. There was right external strabismus, and from time to time there were spasms of all four limbs, and the back was slightly arched. On the outer side of the right optic disc was a large, prominent, dark, brick-red, subretinal swelling about four times the diameter of the disc. A similar swelling was seen in the left eye. Two pints of urine of specific gravity 1005 and containing 2·5 per cent. of sugar were drawn off. Between admission and death six pints were collected. The breathing became difficult, and he died seven hours and a half after admission. Blood clot was found in both the subdural and subarachnoid cavities nearly all over the surface of the brain; it had extended along the sheath of the optic nerve, ultimately getting under the retina. The hæmorrhage came from a small aneurysm springing from the right internal carotid artery just at its termination. The whole of the rest of the body was absolutely healthy.—

The PRESIDENT, after remarking that in some cases of intracranial arterio-venous aneurysm the sound was very loud, so that it could be heard at some distance from the patient, inquired if anything was audible on auscultation in the cases which had been related.—Sir DYCE DUCKWORTH thought that there was no evidence to show that in these cases of intracranial aneurysm the bruit generated travelled wide of the unfortunate possessor of it, though the patients themselves often heard the murmur loudly. Cases of aneurysm were rare at so young a period of life apart from ulcerative endocarditis or syphilis. Syphilis was undoubtedly the antecedent in the majority of cases of aneurysm, associated with strain or some other exciting cause. He remarked on the very irregular distribution of the atheromatous patches in many of these cases; for the limb arteries might be perfectly elastic and normal, and yet the cerebral arteries might be extensively diseased.—Dr. S. WEST asked the readers of the papers whether in their respective hospital museums they possessed many intracranial aneurysms of the large size of those shown. There were usually few or no symptoms until the actual rupture of the aneurysm occurred. The majority of aneurysms on cerebral arteries which he had seen were not larger than a pea. Some years ago he had shown to the Pathological Society some specimens of intracranial aneurysm in young people, one being in a lad of twelve, who showed no symptom other than coma. In that case the aneurysm was very small.—Mr. KESTEVEN asked whether there was an alcoholic history in these cases.—Mr. A. PEARCE GOULD asked whether Dr. Bradford and Dr. Hale White had any theory as to the cause of the aneurysm in these cases. Was any malformation of the bones of the skull discovered which would expose the artery to special irritation?—Mr. BARKER remarked that there were two intracranial aneurysms in the museum at University College which were larger than those shown.—Dr. BRADFORD, in reply, said that in his case there was a distinct history of syphilis, but not of alcohol. The account of the prodromal symptoms was only elicited from the relatives after the patient's death, and those symptoms were only of a trivial character and would not have been valued without the light thrown on the case by the post-mortem examination.—Dr. HALE WHITE, in reply, said that these aneurysms were undoubtedly larger than usual. There was no history of alcohol in his cases; indeed, there was an absence of known cause and of prodromal symptoms in both his cases. The second woman lived an extraordinarily long time after the rupture of the aneurysm. He desired to ascertain if subretinal hæmorrhage had been previously observed in this class of case during life. A distinguished ophthalmic surgeon to whom he had spoken on this subject informed him that he had seen subretinal hæmorrhage in a man after a fall from his horse in the hunting-field.—Dr. S. WEST added that, though he had made a routine habit of examining the eyes in all cerebral cases, he had never met with an instance of subretinal hæmorrhage. There was a specimen of intracranial aneurysm in the museum of St. Bartholomew's Hospital which was larger than those shown.

Dr. J. E. PAUL read the notes of a case of Acute Pancreatitis. The patient was a man aged forty-three. On the night of Aug. 28th, 1893, he was seized with pain in the abdomen; the pain was colicky in character and lasted only a few minutes. On the following day he had a recurrence of the pain. On that day he vomited twice, and once on the 30th. His bowels had been confined since Aug. 27th, for which he had taken some purgative pills; but they failed to act. There was no history of any similar attack or of any abdominal trouble. On examination his abdomen was found to be slightly distended and could be readily examined, causing him very little pain. Nothing abnormal could be detected by manipulation. The rectum was loaded with fæces. The pulse was 82 per minute and fairly full, and the temperature 100·6° F. The tongue was slightly furred. He was ordered an enema, which evacuated a large, constipated, but otherwise normal stool. An hour and a half later he was noticed to be collapsed, with cold, clammy extremities, and radial pulse scarcely perceptible. He died eight hours after admission. The temperature rose to 104° just before death. Two drachms of urine had been passed just before death, containing about a quarter albumen, granular and hyaline casts, a few red blood corpuscles, but no sugar. At the necropsy the peritoneum covering the pancreas was found to be glued with recent lymph to the posterior surface of the stomach. The pancreas itself was much swollen, and hæmorrhages were to be seen, being most numerous in the tail. The stomach and duodenum were healthy. The remaining organs were healthy, except for a cloudy swelling of the kidneys. There was no fat necrosis. Microscopic examination of the pancreas showed considerable disintegration, with total destruction in parts of the structure of the organ. Numerous hæmorrhages were to be seen, as well as clumps of crystals of hæmatoidin.—Dr. SAVILL said that he had had under his care at the Paddington Infirmary four or five years ago a patient who was admitted with symptoms pointing to obstruction of the bowels. An enema was administered, which only aggravated the symptoms. Mr. Treves, who happened to visit the institution that afternoon, saw the case; he performed an exploratory laparotomy, but the patient shortly afterwards died. A quantity of recent lymph was found effused behind the peritoneum at the necropsy, but a histological examination of the pancreas was not made.—Mr. BARKER asked if, in the case related, there was any infiltration of the soft structures behind the peritoneum; for such a condition was interesting to operating surgeons. In most of the recorded cases of acute pancreatitis the leading symptoms at the onset had been those of acute intestinal obstruction.—Dr. BRADFORD said that he saw the case during life and witnessed the necropsy. It seemed to be a true instance of acute hæmorrhagic pancreatitis. Clinically the striking feature was the extreme collapse of the patient, which suggested either intestinal obstruction or perforation of the bowel.—Dr. PAUL, in reply, said that there had been no effusion of lymph behind the peritoneum.

Dr. SOLTAU FENWICK described a Fatal Form of Tetany associated with Chronic Dilatation of the Stomach. Case 1: A man aged thirty-four was admitted into hospital in 1893 for severe vomiting and cramps in the arms and legs. He stated that for six months he had suffered from pain in the stomach after meals and attacks of vomiting. Two days before admission he was suddenly seized with cramps in the muscles of the thighs, legs, arms, and hands, immediately after vomiting a large quantity of fluid. The patient was found on examination to present the symptoms of tetany. The arms were flexed and adducted, the fingers clenched over the thumbs, and the lower extremities rigidly extended, with the feet in the position of equino-varus. The superficial and deep reflexes were exaggerated, and the urine was retained. The temperature was normal, but the respiration was somewhat hurried, and the face and limbs were rather cyanosed. The stomach was dilated to the umbilicus, and the bowels were confined. The tonic spasm disappeared suddenly on the fourth day of the attack, but reappeared three days later and lasted for fourteen hours. The urine contained a trace of albumen and sugar. During the next ten days the patient remained free from the disease and could move his limbs with ease, but at the end of that time the spasms suddenly returned and continued for an hour and a half. After another mild seizure, which occurred three days afterwards, the disease disappeared for more than a fortnight, but a renewal of the vomiting was followed once more by tonic spasm of the extremities, and on this occasion the muscles of the jaw and neck also became stiff. The temperature rose rapidly, the patient became comatose, with dilated pupils, and death supervened from respiratory failure within twelve hours of the commencement of this, the seventh, attack of tetany. At the necropsy the stomach was found to be considerably dilated owing to the contraction of a chronic ulcer in the pyloric end of the organ. The other organs were healthy.—Case 2: A man aged forty-six, who had suffered from the symptoms of ulceration of the stomach for four years, was suddenly seized with tonic spasms of the extremities after an unusually severe attack of vomiting. The condition closely resembled true tetany, and the seizures were repeated several times. The stomach was found to be considerably dilated, and it was accordingly washed out with warm water and the patient was instructed how to perform the operation for himself. Two years later there had been no recurrence of the spasms, and the general health had improved considerably under the use of lavage twice a week. The stomach was still dilated, but the pain and vomiting were much less severe. Tetany complicating chronic dilatation of the stomach was first recorded by Kussmaul in 1869, and since that time twenty-six cases of the affection had been published. In the majority of these the gastric symptoms had been present for many years, and in 92 per cent. of the cases which were submitted to a necropsy a chronic ulcer in the vicinity of the pylorus was found to be the cause of

the dilatation of the stomach. In every case the tetany followed severe vomiting, the attacks lasting from one hour to several days. In seven cases the condition of tetany was further complicated by seizures of a tetanic nature, in which trismus and opisthotonos were usually marked symptoms, while in three others epileptic convulsions supervened. All varieties of the disease were extremely fatal, especially the two latter, and of the twenty-six instances of the affection no fewer than eighteen, or about 70 per cent., terminated in death. It is probable that in these cases an organic poison was manufactured in the stomach which by its absorption into the general circulation acted upon the central nervous system as a convulsant. The rational treatment, which had met with considerable success, was the regular employment of lavage, either warm water or a weak solution of resorcin being used.—Dr. HOLMAN said he had recently heard Dr. Ogle of Reigate describe the case of a patient who was admitted to the Cottage Hospital there for severe vomiting. On examination the stomach was found to be much dilated. It improved at first under treatment, but then the vomiting became incessant, and so the stomach was washed out. The patient had two attacks of tetany and died in the course of the second. At the necropsy no sign of ulceration was found, but the stomach reached far below the umbilicus.—Dr. FENWICK, in reply, said the case just quoted was interesting on account of the absence of ulceration. It was necessary not only to empty the stomach but to maintain it in a state of asepsis in order to bring about relief of the symptoms.

Mr. EVE read notes of a case of Tuberculous Lymphangitis following a Sore on the Finger. The patient, a woman aged forty-seven, was first seen by him at the London Hospital in February, 1890. On the dorsum of the left index-finger, just above the distal joint, was a superficial sinus surrounded by flabby granulations. At the base of the finger, over the metacarpo-phalangeal joint, was a superficial cold abscess. Several larger abscesses were distributed in linear series along the dorsum of the forearm and the inner surface of the lower third of the upper arm in the course of the lymphatics. There were also a few firmer peri-lymphatic nodules which had not broken down. The axillary lymphatic glands were much enlarged. There was evidence neither of phthisis nor of other tuberculous lesion. The disease commenced with what she termed a "whitlow" on the left index-finger two months before she came under observation. She could not remember having injured the finger, and no phthisical patient had resided in the same house. It appeared probable that an ordinary whitlow had been inoculated, perhaps in washing a handkerchief soiled with tuberculous septum. For the purpose of establishing the diagnosis guinea-pigs were inoculated with pus from the abscesses, with positive results. The patient was admitted to the hospital under one of his (Mr. Eve's) senior colleagues, and the larger abscesses were opened and scraped. In February, 1891, she returned with a fresh crop of abscesses, the first crop having cicatrised and healed. Her general health continued to be good. She declined any further operation and soon disappeared. In January, 1893, she had a sinus over the dorsum of the forearm, extending deeply between the muscles. There were also some fresh superficial ulcers on the hand and forearm. These were scraped. Examination of her chest revealed no evidences of tuberculosis. Since then he had been unable to trace her. The condition of the patient was illustrated by coloured drawings and photographs. A similar case described by Tuffier was quoted, in which the patient succumbed to general tuberculosis. A fatal result by generalisation or by phthisis was the usual termination of such cases. Tuberculous lymphangitis almost invariably followed superficial lesions, and usually the cutaneous inoculation of tubercle. In one case there was an anatomical tubercle, in another a warty tubercle on the back of the hand, and in three other cases the patients were women who developed nodules on the fingers whilst nursing their phthisical husbands. An allusion was made to the various forms of tuberculous lymphangitis described by Goupal. Stress was laid on the necessity of early diagnosis, so that the disease might be extirpated as soon as possible by erasion of the abscesses and removal of the nearest chain of lymphatic glands. One variety, described as "lymphangite, lymphangiectasique," presented the appearances of elephantiasis.—The PRESIDENT remarked that six or seven years ago an instructive account of tuberculosis following inoculation was contributed by a surgeon who had accidentally inoculated his own hand.

PATHOLOGICAL SOCIETY OF LONDON.

Strangulated Ventral Hernia.—Recto-vesical Fistula.—Tumour of Supra-renal Capsule.—Polypoid Tumour of Œsophagus.—Sporozoa of Variola and Vaccinia.

THE first ordinary meeting of this Society for the present session was held on Oct. 16th, the President, Dr. PAVY, being in the chair.

Mr. STEPHEN PAGET showed a specimen of Strangulated Ventral Hernia taken from a woman aged fifty, who for four or five years had complained of pain in the left iliac region, in the neighbourhood of the sigmoid flexure. The pain occurred in attacks at first with intervals of three months, but latterly they had been more frequent, coming on every seven or ten days. The pain was at first diffused, but afterwards was localised to one spot. On admission the patient presented all the signs of acute intestinal obstruction, and a swelling was felt in the anterior abdominal wall. This swelling was, after consultation, thought to be a cyst of the ovary dragging on the bowel. Operation was delayed until the following day, when the vomiting had become fæcal. Laparotomy was performed, and the swelling was then found to be a strangulated ventral hernia, which had forced its way through the abdominal wall outside the rectus muscle. The intestine was not adherent, but was gangrenous and gave way when manipulated. An artificial anus was made, but the patient did not rally, and died shortly afterwards.

Mr. STEPHEN PAGET showed a second specimen of Tuberculous Recto-vesical Fistula. The specimen was obtained from a man of intemperate habits fifty years of age. He had physical signs of lung trouble, with hæmoptysis and loss of flesh. Nine months before his death he had been treated for chronic cystitis, and on entering the hospital passed urine mixed with fæces. Next morning he died suddenly from cardiac failure. At the necropsy both lungs were found to be tuberculous, the right testis was converted into a caseous mass, and the right cord was thickened. The wall of the bladder showed miliary tuberculous deposits. A mass was found lying between the rectum and the bladder, composed of the débris of old tuberculous glands and scar tissue. In this mass were two fistulous tracks; one led through from the bladder to the rectum, and the other led from the rectum into the mass and then opened again into the rectum lower down. Mr. Paget thought that the disease probably started in the bladder.—Mr. HURRY FENWICK agreed with Mr. Paget concerning the rarity of the specimen, and stated that vesico-rectal fistulæ of tuberculous origin occurred in about 4 per cent. of all cases of urinary tuberculosis; at least, he had had four undoubted instances in 150 cases of urinary tuberculosis which he had treated. He pointed out how rare it was for the lower urinary organs to become affected with tubercle from the lungs, as in this case. As this was contrary to the accepted opinion, he stated that out of 1000 consecutive post-mortem records of chronic phthisis at the Brompton Consumption Hospital, only twenty cases were noted, about 2 per cent., as having the lower urinary and genital tracts affected. He knew these necropsies to have been very thoroughly performed and the facts reliable. Clinically he was certain that the converse of this law was true—viz., that it was equally rare for the lungs to become affected from chronic urinary tuberculous foci. He was aware that this statement also was at variance with present-day teaching. Mr. Fenwick joined issue with Mr. Paget as to the origin of the fistula and contended that it did not start from the bladder ulcerating into the bowel, but probably from a tuberculous deposit in the vesiculæ seminales breaking into both rectum and bladder. His reasons for this belief were (1) the vesiculæ were more often affected in chronic phthisis than the bladder (13 out of 20 cases noted in the 1000); (2) the bladder of the case in point was not ulcerated severely but was more affected by miliary tubercle; (3) in the case under his own care the vesicula was undoubtedly the starting point; (4) the channel of communication was extremely tortuous; and (5) intestinal symptoms had existed prior to the urinary trouble.—Mr. BOWLBY said that primary tuberculous disease in the bladder was usually most extensive low down in the region of the trigone or of the prostate; whereas in the case shown the bladder wall was involved high up. Again, there was no extensive tuberculous ulceration of the bowel, such as one would expect to find if the tuberculous mischief had commenced in the rectum. He concurred with the last speaker that the

disease probably began in the vesiculæ seminales, and he asked if these organs had been examined.—Mr. E. WILLETT remarked that there were three openings into the bowel, but only one into the bladder, which was against the primary origin of the disease in the bladder.—Mr. PAGET, in reply, said that he had not examined for tubercle bacilli, and that he would make a careful dissection of the vesiculæ seminales and add the result to his account of the specimen.

Dr. ROLLESTON showed a Tumour growing from the upper end of the left supra-renal capsule. The tumour was rather larger than a chestnut, and the rest of the capsule was healthy, except for some small "adenomata" or collections of cells undergoing fatty degeneration. On section it was firm, brown in colour, and speckled with hæmorrhagic points; it was not translucent, and did not show any caseous spots. Microscopic sections taken from various parts showed the same changes varying in degree—viz., increased fibrous tissue containing blood channels which were increased both in number and in size. The fibrous tissue enclosed and had compressed the supra-renal cells, which appeared somewhat altered, but did not show any fatty degeneration. There was no sign of tubercle or of bacilli of tuberculosis. The remainder of the capsule did not show any cirrhotic change. From the limited extent of the fibrous increase the growth appeared to be of the nature of a fibro-adenoma and not to be cirrhotic change. There was, however, no fatty degeneration such as was generally present in adenomata of the capsule, and the amount of fibrous tissue was large. The specimen was removed from a man aged fifty-four years who died with granular kidneys. There was no tubercle anywhere in the body. No abnormality of pigmentation of the skin was noted.—Mr. KESTEVEN asked what was the connexion between the tumour and the adrenal itself.—Mr. TARGETT said that he had seen so-called adenomata as large as the specimen shown; the latter he regarded as an adenoma which had become unusually dense and fibrous.—Dr. ROLLESTON, in reply, said that the tumour arose from the anterior part of the cortex of the adrenal and projected forwards.

Mr. TARGETT showed a specimen of Polypoid Tumour of the Œsophagus. The patient was a man aged sixty-one, who was admitted for dysphagia and emaciation. At the necropsy an ulcerating carcinomatous growth was found at the lower part of the œsophagus, where there was a tight annular stricture. Four inches above this point there projected a polypoid tumour rather larger than a walnut; sessile, white, firm, and fibrous on section. The submucous tissue of the œsophagus extended into its interior, and divided it up into lobules. In the root of the tumour were large alveoli filled with epithelial cells, and its centre was permeated with squamous masses arranged in columns. The main ground substance of the tumour consisted of oval, spindle, and round cells. He regarded it as a rapidly growing fibrous tumour of the submucous coat of the œsophagus, which had become invaded by epithelioma.—Mr. SHATTOCK remarked that if the fibrous tumour had been situated below the carcinoma it might possibly have been an instance of auto-inoculation, but as it was above it this could not have been the case unless it had been inoculated by attempts at catheterism.—Mr. TARGETT, in reply, said that the history stated that catheterism had several times been ineffectually attempted. The cervical glands were full of breaking-down epitheliomatous growth, but there were no secondary nodules in the mucous membrane.

Mr. J. JACKSON CLARKE said that the leisure of a summer holiday had enabled him to give in some detail his observations on Variola and Vaccinia referred to last session. Forty-eight hours after vaccination the rabbit's cornea in and about the seat of inoculation showed the deeper epithelial cells to contain dense, highly refracting particles which lay close to the nuclei. They stained with acid hæmatoxylin, but showed a preference for such stains as eosin, carmine, and fuchsine. These intra-cellular bodies even at this early period afforded evidence of organic processes. Some were dividing into two similar parts, others were enlarged, and showed a central denser spot. Others, again, showed a middle reticulated zone. On the third day some of the intra-cellular bodies had divided into a number of segments, and many of them had escaped from the host cells. Some of these free bodies showed a distinct "peripheral granule layer," such as he had demonstrated in the cell inclusions of cancer, others were large and of a round, oval, or pyriform shape, still others had subdivided into segments, some of which contained nuclear matter, either in the shape of small masses or suggesting radiating bars. Thus these organisms (for their structure enabled them to be recognised as such) presented a series of forms which afforded an exact homology with the bodies described by him as sporozoa in the so-called psorospermosis of the urinary tract, in squamous epithelioma, cancer of the breast, uterus, &c., and various sarcomas. Van der Loeff and L. Pfeiffer had described motile flagellate bodies in the blood in the early fever of variola and in vaccinia. Histological examination of variola, for material for which the speaker was indebted to Dr. T. F. Ricketts, showed parasites indistinguishable from those of the vaccinated cornea, where the parasites were easily distinguishable from leucocytes, degenerated epithelial cells, &c.—Dr. S. M. COPEMAN said that he had been for some years past working at the pathology of vaccinia and variola, but from another point of view. He referred to the work of Van der Loeff, who had found these bodies in every disease of a vesicular nature, which observation, if true, pointed to the probability of these bodies not being specific in relation to variola or vaccinia. The experiments which had been related had been performed on guinea-pigs and rabbits, but so were those performed by Dr. Ruffer, and he had not arrived at a similar conclusion. Neither the rabbit nor the guinea-pig was susceptible to vaccinia—at least not in the same way that the human being was, or like the calf, monkey, cat, or dog; though Dr. Ruffer had said that he had made vaccinia take on the mucous surfaces of the guinea-pig. It would be interesting if the same results could be obtained in the cornea of the dog or monkey, which were susceptible to vaccination in the ordinary way. Mr. D'Arcy Power had shown very similar specimens to those exhibited, produced by irritants of a non-specific character. He believed that the bodies described had not been isolated from vaccine or variolous free lymph, and he asked Mr. Clarke if he had found them free in the lymph of the vesicle. Recently both Dr. Klein and he himself had found in variolous and vaccine lymph a spore-bearing bacillus. It was not found in mature lymph, but only in the lymph of early vesicles. This would account for the fact that the activity of vaccine lymph was not destroyed by being dried on points, for in the mature vesicle only the spores were present. On *a priori* grounds he would expect an acute specific disorder to be more likely to be associated with a spore-bearing bacillus than with a protozoon.—Mr. JACKSON CLARKE, in reply, said that Van der Loeff had described amœbæ having a stellate arrangement and with peripheral granules. Smaller ones were to be found in the vesicles, and in the blood he had seen distinct flagellate bodies, but not in the vesicles. He had used variolous lymph on rabbits and had obtained positive results, and he had obtained two or three specimens from the skin of vaccinated children. He had tried the effect of non-specific irritants after the method of Power, but he only produced an invasion of leucocytes by this method. The infection took place in the deepest cells of the cornea. He had found large free sporozoa in the lymph, but not the amœboid form. The sporozoa showed oval cells with granular centres and tough ectosarcs, and they could be seen breaking up into small bodies while still in the epithelial cell. These sporozoa were commonly accompanied by bacilli wherever they were found. Many sporozoa would live without moisture, and, indeed, would stand drying extremely well. He concluded by saying that his recent research completely supported his original conclusions regarding carcinoma and sarcoma.

The following card specimen was shown:—

Dr. ROLLESTON: Traction Diverticulum of the Œsophagus.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

THE annual general meeting of this society was held at the Royal Infirmary, Newcastle, on Oct. 11th, Dr. ADAMSON (the retiring President) being in the chair. The annual report showed a membership of 206.

The officers elected for 1894–95 are:—President: Dr. F. Page. Vice-presidents: Dr. J. Adamson, Dr. J. Drummond, Dr. G. H. Hume, and Dr. G. H. Philipson. Hon. Secs. and Editors of Journal: Dr. J. Limont and Mr. Rutherford Morison. Committee: Dr. R. Beveridge, Mr. J. Crisp, Dr. D. Drummond, Dr. W. Gowans, Dr. G. Murray, Dr. J. Murphy,

Dr. T. Oliver, Mr. G. W. Ridley, and Mr. G. E. Williamson. The newly-elected President, Mr. F. Page, now took the chair.

Dr. GEORGE MURRAY and Mr. W. G. RICHARDSON showed a patient after Successful Removal of a Sarcoma from the Brain. In February, 1894, the patient had Jacksonian epilepsy of the left arm; later there were nausea, vomiting, headache, and double optic neuritis; complete loss of power of the left arm and considerable loss of power of the left leg developed. There were also pain and tenderness of the right temporal region, with rigidity of the weakened muscles. An operation was performed on July 1st, 1894. The tumour was easily separated from the brain substance and removed, along with part of the dura mater. Power began to return within three days, and he can now walk five miles and has fair power in the arm. The headache has disappeared; the neuritis is subsiding.

Dr. J. MURPHY showed: 1. A patient on whom he had performed Gastro-enterostomy seventeen weeks previously for a large Sarcoma at the Cardiac End of the Stomach. Vomiting, hitherto very severe, had ceased, and the man had gained flesh and strength very rapidly. 2. A man whose Bladder he had sutured after Rupture through crush by a cab. Constant drainage by catheter was employed after suture. 3. A patient whose Appendix was removed following Rupture. He arrived from sea with intense general peritonitis. By a median incision the appendix was found to be lying loose, as also a concretion. The appendix was removed by an incision in the iliac region. 4. A female patient on whom he had operated for Hydatid in the region of the Liver.

Dr. HUME showed a man with Malignant Stricture of the Colon, operated on by intestinal anastomosis. There were before operation absolute constipation and a greatly distended abdomen. The growth lay at the splenic flexure and was firmly fixed and accompanied by enlarged glands. A loop of the sigmoid flexure was attached to the ascending colon by Senn's plates and a circle of Lembert's sutures. The bowels were moved naturally two days later and have acted regularly ever since. The man has recovered weight and strength to an extraordinary degree.

Dr. BRADLEY showed an infant with large Depressed Fracture of the Skull in the Frontal Region, produced during birth. A previous child had been affected in a similar way, but on the opposite side of the frontal region. The promontory of the sacrum protruded abnormally.

Dr. LIMONT showed: 1. A boy with a Band Morphœa extending from near the coracoid process to the tips of the thumb and index-finger. Additional patches were present in the axilla and in the two vaccination marks. 2. A woman with Contracting Morphœa following the course of an intercostal nerve. There was marked pigmentation in and around the band. In each breast were two early patches of a violet colour, but beginning to turn white in the centre. 3. (By photograph.) A girl with Symmetrical Patches of Morphœa behind the Knees, in which there was considerable loss of sensation. 4. A girl with Localised Mycosis Fungoides of one Leg.

The PRESIDENT exhibited a case of Aggravated Club-foot in a young child, in which an excellent result had been obtained by Phelp's method of operating.

The following specimens were shown:—

Dr. J. MURPHY: (1) Rupture of Intestine; (2) Number of New Instruments used in Abdominal Surgery.

Mr. RUTHERFORD MORISON: (1) Gall-stones from case of Cholecystotomy; (2) Ectopic Gestation.

THE managers of the Royal Edinburgh Asylum for the Insane announce that the New Craig House will be opened by their Graces the Duke and Duchess of Buccleuch and Queensberry on Friday next, the 26th inst.

THE MATRONS' COUNCIL.—This society, consisting of the matrons of many of the principal hospitals, has lately been formed for the discussion of professional nursing subjects with a view to organising the education of nurses upon a uniform basis. The first conference will be held on Thursday, Nov. 1st, at 8 30 P.M. in the Medical Society's rooms, 11, Chandos-street, Cavendish-square, when a paper entitled "The Method of Training Nurses in the Royal Infirmary, Glasgow, and a Plea for Conformity in the Education of Nurses" will be read by Mrs. Strong, matron of the Royal Infirmary, Glasgow. The paper will be open to discussion.

Reviews and Notices of Books.

Die Extraktion der Zähne. [*The Extraction of Teeth.*] By Professor F. BUSCH, Director of the Dental Institute at the Royal University of Berlin. Berlin: August Hirschwald. 1894.

THIS *brochure* gives a lucid, concise, and interesting review of the art of extracting teeth. This operation, Professor Busch justly says, is thought by too many to be of the simplest character, requiring little practice and almost any pair of forceps, whereas in reality it often demands great dexterity and judgment, only acquired by long experience and a large variety of specially adapted instruments. From an examination of skulls referred to the quarternary period he found many carious teeth and evidences of extraction during life, though by what means this was effected is not known. In the ruins of the Temple of Apollo at Delphi forceps made of lead have been unearthed, probably having been used to remove loose teeth. When teeth were firmly fixed in their sockets it seems to have been the practice of the ancient Romans and Egyptians to fill the carious cavities with all sorts of dirt and offensive matter in order to produce periostitis and abscess, thus rendering the teeth sufficiently loose to be extracted. Probably necrosis of the jaw often resulted. For a century after the destruction of the Roman Empire little or no progress was made in surgery until the time of Andreas Vesalius, the physician to Charles V., and the same may be said of dentistry. In the Middle Ages the instruments used for the extraction of teeth were the "pelican" and the "over-throw," which were alike in this that the point of support (fulcrum) was the alveolus, the hook being applied to the opposite side of the tooth. About 1750 the "key" was introduced, but to what country it owes its origin is doubtful. In Germany it was known as the English key and in England as the German key. In 1841 Sir John Tomes endeavoured to avoid the harmful contusion of the gum and alveolus which the key caused by having constructed a number of pairs of forceps which fitted exactly the crowns, or rather necks, of the different teeth, since which time the key has gone out of use, and is only used by Professor Busch for demonstration purposes. The author lays down the axiom that "all teeth which *can* be extracted by forceps *should* be extracted by forceps."

Professor Busch has about twenty pairs, but the greater number are only used in special cases; these forceps are very similar in shape to those used in this country, only judging from the illustrations somewhat more massive, and are undoubtedly a great improvement on those that we have seen of German manufacture, which are to our English ideas somewhat clumsy. With regard to the position of patient and operator he follows the general rules, but for the extraction of the upper teeth from the first biscuspid backwards to the third molar he advocates a procedure which he believes to be original, and claims for it greater power and more facility in seeing the part operated on. The patient is placed in an ordinary low armchair with a pillow under the shoulders, the head being bent backwards. The operator stands behind the patient so that the patient's head touches his breast. He then bends forward over the patient, so as to look into the mouth from above; the left thumb pushes the cheek aside and lifts the upper lip, while the left forefinger supports the forceps, which are reversed, the beaks pointing towards the operator.

With reference to the root-screw he says he has rarely found it of any value; and in speaking of elevators, which he esteems highly, he gives one "wrinkle" worthy of note. In removing a root with this instrument—say, for instance, a wisdom tooth with the second molar *in situ*, but the first molar

absent—it is advantageous to place a wedge of hickory wood between the bicuspid and the second molar to act as a support and thus render the risk of its being loosened or luxated when used as the fulcrum for the elevator. The subject of anæsthesia in dental operations is considered, nitrous oxide gas, nitrous oxide gas and oxygen, ether, &c. being passed in review. With regard to the first he gives his opinion that it is rarely possible to remove teeth on opposite sides of the mouth owing to the loss of time incurred in changing the position of the gag, but surely with a Mason's gag—which by the way does not appear in his list of instruments—used by a capable anæsthetist three to five seconds will suffice to accomplish this. Professor Busch's experience of nitrous oxide gas and oxygen has given him great satisfaction, but he regrets the necessity of having to use a gasometer; we would therefore draw his attention to Dr. Hewitt's portable apparatus, which can be obtained, we believe, in Berlin. This little treatise shows on every page that its author is thoroughly practical and experienced in the subject of which he treats.

Archæological Survey of India: The Bower Manuscript. Facsimile leaves, Nagary Transcript, Romanised Transliteration and English Translation, with Notes. Edited by A. F. RUDOLF HOERNLE, Ph.D., Principal, Calcutta Madrasah. Two Parts. Published by order of the Government of India and under the patronage of the Bengal Government. Calcuttta. 1893 and 1894.

THIS promises to be a very curious book. The two fasciculi published by the Archæological Survey of India contain the first two parts of an unique transcript, an ancient medical treatise on Hindu medicine of the sixth century, which is being edited by the learned Professor Hoernle of Calcutta, a work which when completed will form a valuable contribution to ancient Oriental literature and a welcome addition to similar publications already in existence, such as "Charaka Samhita," edited by Pandit Jibananda Vidyasagara, Susruta, Ashtanga Hridaya, and others. The first fasciculus contains a general introduction principally. In the second, after the usual salutation to the divinities, the author, whose name is not given, says: "I will compile a standard manual by the name of Navanitaka, which means 'The Cream,' intending to give approved extracts from more ancient medical authorities containing formulas of old physicians. Whatever is beneficial to men and women afflicted with various diseases, that will all be declared in this book. It should become a favourite with those physicians whose minds delight in conciseness, but by reason of the numerous formulas it will also be welcome to those who desire copiousness."

The treatise is divided into sixteen chapters, of which three have been published. The headings of the chapters are as follows: (1) Formulas for preparing Powders; (2) and (3) to prepare Clarified Butter and Medicated Oils; (4) on the Treatment of Various Diseases; (5) on Enemata; (6) on Tonics; (7) on Gruels; (8) on Aphrodisiacs; (9) on Collyriums; (10) on Hair-washes; (11) on Chebulic Myrobalan — sweet juice prepared from Terminalia chebula (Lindley); (12) on Bitumen; (13) on Plumbago Root; (14) on Treatment of Children; (15) on Treatment of Barren Women; (16) on Treatment of Women blessed with Children. These sixteen chapters will constitute the Navanitaka. The author, whoever he was, seems to have anticipated the patent medicine "professors" of our times and to have been a sort of medical "Universal Provider" of his day, who would probably have held the specialist of modern times in contempt.

Among the numerous quaint formulæ for preparing powders, pills, medicated liquors, clarified butter, medicated oils, plasters for curing adenia, &c., there is one for preparing an iron tonic in powder, consisting of thirty-eight vegetable ingredients, with the following directions:—"Make these ingredients of the medicine into fine powder and add pulverised iron, in quantity twice as much as that powder. Then, putting the whole together, make it up with honey into a linctus. Of this a suitable quantity may be taken, and afterwards a suitable quantity of milk should be drunk, but without taking any solid food. This is a well-tried alterative tonic, which is known by the name of Ayorajeya (= made of powder of iron). If taken throughout the year it will prolong life for a hundred rainy seasons; if taken for two months it will prolong life for one hundred autumns. It destroys an angry swelling, it cures morbid pallor, piles, dyspepsia, worms, fistula in ano, jaundice, diseases of skin, enlargements of the abdomen, spleen, abdominal tumours, epilepsy, severe abdominal pains, gripes. Indeed, in whatever disease this Ayorajeya powder is used, that it cures at once....."

Illustrations of Pathological Anatomy. With Descriptive Text. By Professor Dr. ALFRED KAST and Dr. THEODOR RUMPEL. English edition, revised and edited by M. ARMAND RUFFER, M.D. Oxon. Parts VI., VII., and VIII. London: Baillière, Tindall, and Cox.

THIS publication is proceeding simultaneously in Germany and in this country, the monthly parts containing four plates, with descriptive text. The three parts under notice include several very excellent and faithful representations of morbid lesions, amongst which may be mentioned that of Cirrhosis of the Liver and Sarcomatous Metastasis in the Intestine in Part VI., Ulcerative Endocarditis and Endocarditis Vegetans in Part VII., and the very admirable representations of the Intestines in Typhoid Fever in Plate VIII. Indeed, we know of no drawings which so faithfully depict the lesions in typhoid fever as these latter. They form, too, a connected series—from the stage of swelling to that of ulceration and of cicatrisation of Peyer's and the solitary glands. The descriptive text gives in most instances a brief history of the case which furnished the specimens depicted and an outline of the results of the post-mortem examination. Such plates as these should prove of great value both to students and teachers, and we note that the terms of issue permit of the purchase of single parts or of single plates if desired—an arrangement of which lecturers on special subjects might wish to avail themselves.

LIBRARY TABLE.

A Guide to the Use of the Buxton Mineral Waters. By W. H. ROBERTSON, M.D. Edin., F.R.C.P. Lond., Consulting Physician to the Buxton Charity and Devonshire Hospital. Buxton: C. F. Wardley. 1894.—This guide to the use of the Buxton mineral waters has reached its twenty-fifth edition, nearly 40,000 copies having been issued. This is emphatic testimony both to the popularity of the Buxton waters and to the trustworthiness and intelligibility of Dr. Robertson's little manual. It is pleasantly written and full of information, and if the general tone is somewhat *couleur de rose* we are prepared for that in a work upon balneology. The Buxton waters are, as is well known, somewhat feebly mineralised, the principal ingredients being carbonate of lime, carbonate of magnesia, chloride of calcium, chloride of sodium, and silica. The gases held in solution are free carbonic acid and nitrogen, the former in small quantity and the latter abundant. As many as 504 cubic inches per gallon of this latter gas are said to be obtained from the waters. To the nitrogen gas Dr. Robertson assigns a very preponderating *rôle* in the therapeutics of the Buxton waters. "It may be advanced," he says, "that the modern researches, discoveries, and deductions of chemistry have

caused more and more importance to be attached to the great elementary principle, with which the Buxton tepid waters are surcharged. The very large proportion of nitrogen contained in the essential crystallisable principles of tea, coffee, and cocoa, in taurine, the great azotised constituent of the bile, in the various fibres and tissues, and in the secretions and excretions of the body ..... are so many indications of the tendencies and inferences deducible from the great and practical advances of modern chemistry and so many reasons why the nitrogen discovered to be contained in the Buxton tepid waters and in an available form for internal or external use may have a significance and justify an amount of expectation that may hardly admit of exaggeration." We confess we think this view of the subject improbable. We are not aware of any facts in chemistry or physiology which would warrant us in assigning an important function to the ingestion of nitrogen or to its external application in a fluid medium. We suspect the undoubted value and efficacy of the Buxton waters are attributable rather to their being conveniently adapted for the numerous internal and external uses of water itself, and that they have a powerful adjunct in the bracing and tonic climate of Buxton.

The Orient Guide. Chapters for Travellers by Sea and by Land, fully illustrated with Black and White Engravings, Coloured Plates, Maps and Plans. Edited by the Reverend W. J. LOFTIE, F.S.A. Fifth Edition, Rewritten. London: Sampson Low, Marston, and Company, Ltd.—This is in many respects a model guide book and should prove a useful companion to intending passengers by the Orient Line of steamships. The information concerning the route, season, voyage, &c., has been carefully chosen, admirably condensed, and at the same time is presented to the reader in a pleasing and chatty form. The introductory chapter, which is chiefly from the pen of the well-known journalist Sir T. Wemyss Reid, briefly describes ocean travelling in the floating palaces of to-day and gives a historical and chronological summary of the origin and progress of the Orient Line. "The Mother Country" directs attention to a few of the more important places and objects of interest in London, the more distant parts of the three kingdoms not being neglected. Succeeding chapters deal with the countries connected with the Orient route. The description of a visit to the Holy Land detailed in "From Naples to Port Said" has been brought up to date from information supplied by the managers of the Palestine Exploration Fund. Natural phenomena likely to attract the voyager's attention are described in chapters on The Stars, and Notes on Nature at Sea and Seamanship and Navigation graphically describe all the traveller can want to know with regard to the vessel. A novel feature of the book is the full-page reproduction of water colour drawings of the Orient fleet by W. L. Wyllie, A.R.A.

The Water-supply of Towns and the Construction of Waterworks: a Practical Treatise for the Use of Engineers and Students of Engineering. By W. K. BURTON, Assoc. Memb. Inst. C.E., Professor of Sanitary Engineering in the Imperial University, Tokyo, Japan, &c. London: Crosby Lockwood and Son. 1894.—This large volume of over 300 pages, which is well got up and illustrated with numerous plates and other illustrations, the author tells us, is largely based upon his own practice in this particular branch of engineering, and embodies the conclusions at which he has arrived as the result of a careful study of the various questions dealt with, while he has at the same time made use of such information as was already available in standard works and other publications. In order not to interrupt the continuity of the text as regards the general reader the author has relegated to the position of footnotes all the matter specially applying to Japan, and likely to prove of interest and utility to the Japanese student in particular. It would be impossible, within reasonable compass, to afford anything like an adequate review of this volume. We must, therefore, content ourselves by summarily saying that the subjects seem to us to be ably discussed, with a practical aim to meet the requirements of all its probable readers. We may add that the following portions of the book struck us as very good: the introductory chapter and those dealing with the different qualities of waters, the quantity of water to be provided and its purification, settling reservoirs, filtration, distribution systems, prevention of waste of water, pipes for waterworks, provisions for the extinction of fire, and especially Appendix 11, consisting of Notes and Criticisms by Dr. Divers, F.R.S. The illustrations are excellent, and we are glad to notice that a good index saves the reader's time and facilitates his reference to any particular point or subject about which he seeks information.

Analytical Records
FROM
THE LANCET LABORATORY.

MISTURA DAMIANÆ COMPOSITA.
(C. J. HEWLETT AND CO., 40, 41, 42, GREAT EASTERN-STREET, E.C.)

DAMIANA extract is prepared from the leaves of a species of Turnera and is credited with tonic, diuretic, and aphrodisiac properties. In the above preparation the extract is skilfully prepared, from a pharmaceutical point of view, with nux vomica. The compound is claimed to combine medicinal properties of especial value in nervous and cerebral exhaustion and in chronic alcoholism. Mistura damianæ composita (Hewlett) is a clear dark-brown solution with an acid reaction, and, although an alcoholic extract, is miscible with water, acids, or even alkalies. Strychnine was readily extracted and recognised on suitable treatment with solvents and reagents. Though probably a useful medicament, damiana is not included in the British Pharmacopœia.

FIOGO: A FARINACEOUS FOOD.
(THE FIOGO COMPANY, 57, CABLE-STREET, E.)

According to our examination "fiogo" consists of prepared maize meal, containing an augmented amount of mineral matter due to a small addition of common salt. It has been evidently so treated as to render it nutritious and digestible, since under the microscope the starch cells are seen to be ruptured, and accordingly both soluble starch and dextrine occur in important quantity. In comparison with ordinary flour, maize meal is slightly richer in nitrogenous substances, while, with the exception of oats, maize contains the largest proportion of fatty constituents of all the cereals. In other respects it approximates closely to that of wheat flour. Thus the above preparation, according to our analysis, contains moisture, 8 per cent.; mineral matter, 1·01 per cent.; nitrogenous constituents, 12·9 per cent.; starch &c., 78·39 per cent. Its food value is therefore unquestionable, and it is satisfactory to note that a preparation of this valuable dietetic kind is to be procured at so moderate a price.

PEPSIN AND MEAT PEPSIN BISCUITS.
(E. BLATCHLEY, 167, OXFORD-STREET, W.)

Two varieties of biscuit have been examined, one containing 5 per cent. of Liebig's extract of beef and a grain of pepsin, the other a grain of pepsin only. The addition of meat extractives of course enhances considerably the food value of a biscuit, and chiefly in the direction of nitrogenous material, and that this has been accomplished is confirmed by our analysis, which shows a proportion of nitrogen equal to 2·65 per cent. Both biscuits exhibit excellent texture and yield to cold water an unusual proportion of soluble matter, so that it may be justly inferred that the combined action of

cooking and the added enzyme has effected a partial dissolution of the starch cells, rendering the biscuits useful, probably, in cases of impaired digestive function.

V.V.O. SCOTCH WHISKY.

(LAIDLAW AND SANDEMAN, GALASHIELS, N.B.)

Freedom from excess of extractives and acid constituents and the possession of excellent alcoholic strength and purity of spirit are the chief chemical characteristics of this product. It exhibits a moderately full but distinctly "smoky" flavour, yet with a blandness doubtless due to careful maturing and a taste of the character that would be expected of a spirit described as "very, very old." Not the slightest indication was obtained of the presence of anything but wholesome ethers and alcohols. The results of analysis were as follows: Alcohol, by weight 45·32 per cent., by volume 53·01 per cent.; extractives, 0·20 per cent.; ash, 0·06 per cent. It is evidently an excellent whisky.

IRON JELLOIDS, AN IMPROVED FORM OF BLAUD PILL, EACH CONTAINING TEN GRAINS.

(WARRICK BROS., 18, OLD SWAN-LANE, E.C.)

In the "jelloid" the protective influence of a firm, jelly-like substance is used for the preservation of the real protocarbonate of iron against external oxidising influences. The iron salt, we find, is uniformly incorporated with the jelly-like mass, the external coating being dark-brown from contact with air, while the enclosed mass as seen on section is a delicate pea-green, which, added to the chemical reactions we tried, afford evidence of the permanency of the ferrous salt. Although the "jelloid" may be easily swallowed, yet it is really not unpleasant when dissolved in the mouth. The introduction of the "jelloid" is another step towards the perfect administration of unoxidised iron salts, since it probably secures the absorption with certainty of the salt in the ferrous condition.

ROYAL SELTERS NATURAL TABLE WATER.

(AGENTS, PICKARDT AND CO., 23, REGENT-STREET, S.W.)

The water of the mineral springs of Niederselters belongs to the well-known alkaline carbonated group, representatives of which occur so abundantly in Germany. It is peculiarly bland to the taste and is said to contain only that amount of carbonic acid gas which occurs naturally in the water as it issues from the wells. In other words, it is bottled at the normal pressure of the atmosphere, the tension at the surface of the well, and hence is only moderately sparkling. Analysis gave the following results:—Total mineral solids, 4·02 grammes per litre; alkalinity expressed as bicarbonate of soda ($NaHCO_3$), 2·10 grammes per litre; chlorine, 1·47, equal to common salt, 2·43 grammes per litre. Lithium was readily detected in the residue by means of the spectroscope. Apart from the satisfactory mineralised character of the water, which renders it a useful and agreeable antacid, it also exhibits a remarkable degree of organic purity.

KIRBY'S SAPONACEOUS THYMOL POWDER.

(H. & T. KIRBY & CO., 14, NEWMAN-STREET, OXFORD-STREET, W.)

The composition of this powder is readily ascertained on chemical and microscopical examination. It contains one per cent. of the pleasantly smelling and powerful antiseptic thymol, associated with powdered soap and a well-known mineral antiseptic. It imparts a most agreeable cleansing sensation to the skin when used after the manner of soap, but applied in powdered form. Its purity of appearance and pleasant odour are also commendable features.

"PERFECTION" FLOUR AND BREAD.

(AARON JONES, KING'S NORTON, NEAR BIRMINGHAM.)

This flour is characterised by an attractive appearance, consequent on its high degree of whiteness—a character which is popularly but erroneously supposed to indicate quality. According to our examination, however, the above flour, in spite of this feature, has undergone no impoverishment, as is frequently the case with ordinary white wheaten flours. Thus it does not lack the valuable mineral constituents of the wheat berry, the mineral matter being in excess by at least 0·2 per cent. of average wheaten flour. A specimen of bread made with "perfection" flour exhibits the same pure white colour, while it possesses a good flavour and satisfactory texture. The absence of alum or other bleaching agents was ascertained.

(1) DIAPHTHERIN, (2) EMOL KELEET.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL-BUILDINGS, E.C.)

Diaphtherin proves on examination to be a light yellow powder resembling sulphur, having a smell distinctly like creasote. It is readily soluble in alcohol and in cold water, the aqueous solution giving a rich violet colour with perchloride of iron and a white precipitate with barium chloride. On heating it melts and appears to distil unchanged. The composition of diaphtherin is represented by the formula $C_{21}H_{22}SN_2O_7$, and may be regarded as an ortho-oxychinoline-sulphate containing phenol "in a similar state of combination to the water of crystallisation in other substances." From the researches of Professor Emmerich it appears to possess very powerful antiseptic properties, while it is also stated that, unlike phenol, it is non-corrosive, and, unlike oxychinoline, non-toxic.

Emol keleet is the apt if hybrid name—for we surmise that it is derived from the Latin word *emollio*, to soften, and from the German *Klei*, clay—given to a slightly puce-coloured powder which is characterised by its remarkable impalpability. It occurs as a natural deposit in Scotland, and according to our examination appears to be of the character of a very fine steatite. When rubbed between the fingers it imparts a peculiarly smooth micaceous feeling, so that the individual particles are not in the least perceptible. Its delicate puce colour is due to traces of iron; but "emol keleet" consists for the most part of pure silicates, probably of magnesia and aluminium. On account of its remarkable velvety smoothness it should possess a unique value as a dusting powder in the treatment of cutaneous diseases &c. and for allaying irritation. We have not examined a more unctuous earth.

KREAT HALVIVA.

(HALVIVA COMPANY, 4, TEMPLE-CHAMBERS, E.C.)

The use of this interesting bitter is said to be indicated in malarial fever, ague, influenza, and in summer diarrhœa, and is offered as a "well-authenticated substitute for quinine, being without some of the disadvantages attending the administration of that alkaloid." Dr. G. H. Hunter is responsible for the statement that it acts as a tonic and restorative, at the same time serving as a gentle laxative by increasing the secretion of bile. On examination it proves to be an amber-coloured spirituous fluid of powerfully bitter taste, which does not disappear on the palate as does the glucoside bitter of hops. The bitter principles of "kreat" are very soluble in chloroform, the residue obtained from the chloroform being extremely bitter to the taste.

New Inventions.

THE "FARRINGDON" COUCH.

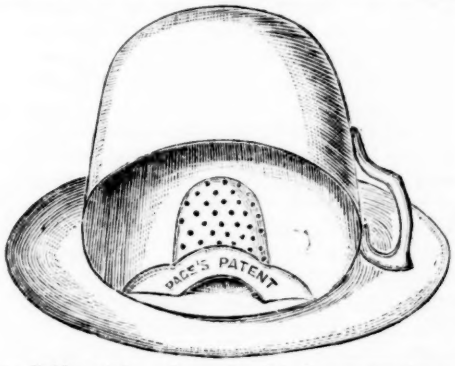
THIS couch has several improvements. The top frame of the couch is luxuriously stuffed and furnished with springs. It possesses three movements, enabling it to be adapted to any

position most comfortable to the patient. The arms are also adjustable. The lower frame has a powerful mechanical movement fitted with levers, which can be easily and silently worked, so that the cushioned top can be brought alongside the bed to any ordinary level of the bed, when the patient can be easily transferred to it and lowered again

to the height of an ordinary couch. These alterations, both in the top and lower frames, are all made by one crank handle. The movements are very simple and noiseless, and can be easily set in motion. The wheels are swivelled and fitted with indiarubber tyres. The couch is made by Alfred Carter, Limited, 47, Holborn Viaduct.

PATENT PERCOLATING TEACUP.

THIS teacup consists of a percolating mouth-piece, either made as a part of the cup itself or separately. In the latter case



any suitable metal may be employed in its construction, and the mouth-piece can be fastened to the ordinary cup by simply clipping it on. It will thus form a sort of strainer, preventing any tea leaves or other sediment (or the solid ingredients of any other beverage) entering the mouth. The required quantity of tea or coffee is placed direct in the cup and boiling water poured on it. This is, in short, one of several designs for dispensing with a pot, and it is an efficacious one. The design is the invention of Messrs. Page and Co., of 163, Pentonville-road, King's-cross.

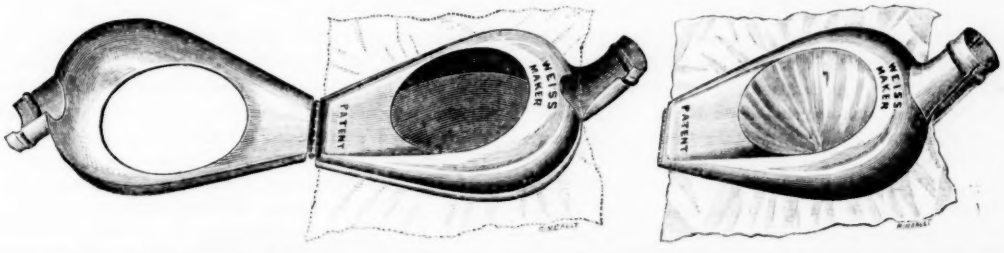
A RECTAL OINTMENT INTRODUCER.

OINTMENTS of various kinds are frequently prescribed by medical men for patients suffering from some form of rectal disease, such as hæmorrhoids, fissure, &c., and they are often advised to pass them into the bowel on their finger. This method, besides being decidedly obnoxious to the patient, is not at all efficacious, the finger as it passes through the anus being grasped by the sphincter, and the ointment consequently prevented from coming into contact with the internal surface of the rectum. For its efficient application some form of introducer is necessary, and the annexed drawing will give a good idea of one I have had recently made by Messrs. Down Bros., St. Thomas's-street, Borough, S.E. To use it, remove the cap and fill the receptacle with the ointment, then replace the cap, and, having introduced the pipe into the rectum, press firmly home, and the ointment will exude through the perforations. This introducer has the advantage that patients can readily use it with one hand, and without any of the ointment coming into contact with the fingers. The portion to be introduced is narrow and does not cause pain in fissure and other cases during its introduction. As the two segments of the instrument do not require to be screwed together to propel the ointment through the apertures, the introduced part remains quiet in the bowel, and so again pain is obviated. I consider the straight stem to be no drawback, as the curved stem might be introduced by the patients with the curve directed in the wrong way. The price being very moderate, the instrument is brought within the reach of hospital patients.

E. C. RYALL,
House Surgeon, St. Mark's Hospital for Diseases of the Rectum.

A NEW BEDPAN.

THIS bedpan, which has been constructed to meet the exigencies of infectious cases, consists of a metal slipper-shaped pan, the top part of which is movable, working on a hinge posteriorly, so as to hold in position a loose lining of waterproof paper which receives the excreta. This is easily removed and, in cases of cholera &c., buried; in non-infectious cases the excreta are disposed of in the ordinary way, the bedpan being at once ready for further use without washing, which, with a pan of ordinary pattern, is often inefficient, however much water may be used, owing to the faults of its construction, as well as dangerous, if the attendant's hands or clothes get soiled in the process, to say nothing of the repulsive aspect of the task to the nurse of the present day, to whom the advantages of this easily asepticised bedpan must be apparent both for hospital and private nursing, as it reduces all odours and uncleanliness to a minimum. The pan, which is also adaptable for vaginal irrigation or for the administration of large enemata by simply omitting the waterproof paper and using it as an ordinary bedpan, has been constructed for me by Messrs. John Weiss and Son, of 287, Oxford-street, London, W.



W. L. CHESTER, M.B., M.Ch., Surgeon-Major.

THE LANCET.

LONDON: SATURDAY, OCTOBER 20, 1894.

STRONG dissatisfaction is being expressed by the profession in the north of London at the action of the House Committee of the Great Northern Central Hospital in opening wards in the hospital for paying patients to be attended by the members of the staff, and that gratuitously. We think the dissatisfaction very reasonable, and we shall be surprised if, after due discussion, this is not shared by many of the governors of the hospital. The step has been taken without due consultation with either the governors or the profession. It is one thing to subscribe to an institution for the poor and another to provide accommodation for those who are not poor. In the admission of patients to hospitals no severe test of poverty is applied, and it is properly recognised that very respectable people may need the accommodation of a hospital; but this does not excuse the introduction of the pay system into a hospital meant for the poor. Such a system may easily lead to a practical exclusion of the very persons for whom hospitals are intended, and may further tend to dry up the springs of charity. From the professional point of view nothing could be worse or more demoralising. The position briefly is this. The staff of the Great Northern Central Hospital have agreed to undertake gratuitously the treatment of the patients of other medical men. It is impossible that the local practitioners can be otherwise than aggrieved at this arrangement or be other than surprised that the staff should have assented to it. It might have been somewhat different if medical practitioners had been allowed to follow their own patients into the hospital and to heal them there. Even then the great objection would remain that the poor would by such admissions be kept out of a hospital meant for their use. It may be urged as an excuse that sufficient funds are not forthcoming to keep in use all the beds provided. Even if this be so, it is a very questionable means of increasing subscriptions to adopt eagerly so commercial a principle in the administration of an essentially charitable institution.

The abuse of hospitals by parsimonious people and the quiet encouragement given to it in many instances by the staff are already sore points with medical men and sources of wide demoralisation among classes that a few years ago would not have dreamed of accepting such relief. In this very hospital, which boasts of its precautions for excluding unfit applicants, there were last year no less than 26,390 out-patients, or an increase of 3820 on the previous year. While giving the hospital every credit for its endeavours to prevent abuse, it cannot be doubted that these 26,390 patients include some thousands who should not receive such accommodation and should not complicate the great problem of medical charity. But the scheme under discussion is a much bolder invasion of private practice, and one from which honourable and hard-working practitioners outside should be saved by the honorary members of the staff of the hospital. We cannot doubt that their adhesion to the scheme has been given reluctantly and under some misapprehension of the tendency of the movement. There has no doubt of late been a disposition to assign the beds of London hospitals to other classes than the poor. But such a practice is a grave violation of the original design of the founders. In the principal instance, that of St. Thomas's Hospital, there is little to justify the authorities of the Great Northern Central Hospital, and still less to justify the members of its medical staff. The governors of the former hospital were driven to this resource by their own reckless imprudence of expenditure. They spent so much money upon bricks and mortar that they were unable to maintain patients in any number corresponding to the palatial building which they had erected. It was a terrible mistake to build a hospital for the poor and find that they had absorbed the money by which the poor were to be maintained in their sickness and their misery as they had been for centuries. But this was the plight in which they found themselves and from which, we believe, they hope to escape. It was in these circumstances that they devised, after much discussion and difficulty, a scheme for receiving into a certain block patients at a certain rate of payment—a scheme of which Mr. (now Sir JOHN) SIMON spoke as follows: "I should feel it a deep humiliation for the hospital that it must lower the flag under which it has worked for so many centuries, and must alter the relation in which it has stood to the poverty and physical sufferings of the people of London." And Sir JOHN SIMON only represented the feelings of the whole medical and surgical staff, who declined to be parties to this scheme or to coöperate in its working. At St. Thomas's Home the patients are attended by the resident medical officer, associated, if desired, with the patients' own medical attendants. If the officers of St. Thomas's Hospital are consulted at all it is in their ordinary private character as consultants. The medical members of the staff of the Great Northern Central Hospital will see how little there is in this arrangement to serve as a justification or a precedent for their position.

There are only two excuses which we can imagine to be made for this new departure at the Great Northern Central Hospital. One is that there are classes of the community needing lodgings, with medical and surgical attendance fully supplied. This is undoubtedly true. But that is no reason why a general free hospital should undertake the business of catering for such classes. This can be done by private persons, and has been already done for a comparatively wealthy class of persons. The other is that in the original constitution of the Great Northern Central Hospital some words are found which give a sanction to the foundation of pay wards. These are of the vaguest sort and form only the smallest and weakest basis for such a vague, undefined, and crude scheme as has been widely advertised without the consent of the governors of the hospital. We are informed that to-day (Friday), at 5 P.M., the Committee has consented to receive a deputation of medical men to present a petition signed by nearly 200 practitioners against the scheme, and we venture to hope that the Committee will

seriously consider the arguments that will be advanced against the new proposals.

THE Hippocratic aphorism which forms the motto of the Royal College of Physicians of London, and which recognises the shortness of life and the length of art, finds fitting commentary in the Harveian Oration delivered by Dr. LAUDER BRUNTON before the College last Thursday. Much as the memory of HARVEY is venerated, it would be manifestly impossible for generation after generation of orators to dwell too exclusively on the personal details of the life of the great initiator of rational medicine without repetition, which becomes tedious, and eulogy, with which the educated are familiar. Dr. BRUNTON, we think, therefore, wisely avoided a biographical reiteration of HARVEY'S immortal services and sketched in masterly outline the labours of his successors. As a preliminary, in the sense of the first portion of the Hippocratic maxim, the orator had the painful duty of referring to the death of Sir ANDREW CLARK, whose devotion to the work of his high office was suitably commemorated. Nor did he omit to point out that when a chief pays the debt of nature his mantle should be reverently laid on the shoulders of a worthy successor; and such the profession recognises in Dr. RUSSELL REYNOLDS. The award of the Moxon Medal for clinical research to one who will be acclaimed by all as the venerable head of the profession in this country—Sir WILLIAM JENNER—whose career of steady and unflagging energy has carried him to so distinguished a position, was felt to be in a measure a set-off to the sadness necessarily induced by the consideration of the loss of Sir ANDREW CLARK.

It is the glory of a beneficent life to know that its footprints guide others. The length of art was illustrated by the citation of the names and deeds of the most notable of HARVEY'S successors. We publish to-day the text of the Oration, which we commend to the perusal of our readers, and need not in this place dwell upon it at length. After reference to interesting and important researches in the physiology of the heart's action and in the elucidation of the causes of the heart sounds Dr. BRUNTON mentioned the interesting fact that Sir CHRISTOPHER WREN, the architect of St. Paul's Cathedral, was the first to experiment by intravenous injection, and passed on to pay a warm tribute to the works of SHARPEY and of those stimulated and inspired by him. The general of an army sometimes gets credit for the work of his soldiers, as at Inkerman; but it is likewise true that the name of the chief is sometimes lost in those of his pupils, and this would seem to have been the case in some measure as regards SHARPEY, and also, but less so, as regards CARL LUDWIG. It is, however, probable that the sense of justice of others recognises this fact more than do the great ignored themselves, for it is a quality of greatness not to be aware of the fact of being ignored. The orator made interesting reference to LUDWIG'S works in elucidating the circulation in muscle, and proceeded to point out the practical application of these researches. In referring to the causation of angina pectoris Dr. BRUNTON'S sense of propriety prevented him from alluding to his own classical observation in this field, an observation for which, nevertheless, many a sufferer must, consciously or unconsciously, have blessed him.

Leaving the domain of physiology proper, the orator brought to recollection some notable advances in physiological chemistry, and concluded the matter of his oration by a reference to the important present and brilliant future of bacteriology, with which the name of PASTEUR is as inalienably associated as is WILLIAM HARVEY'S with the discovery of the mechanism of the circulation of the blood. As regards the manner of Dr. BRUNTON'S oration, it was marked by that wide and discursive information—if we may use the term—with which those who know his work are familiar, and by the telling symbolism of many of his expositions. The limits of time prevented him from referring at length to the pharmacology of the circulation; and he concluded an interesting address by an eloquent peroration, in which he inculcated mutual love and a noble steadfastness of purpose and touchingly referred to the exemplification of these virtues in the lives and in the deaths of WILLIAM HARVEY and Sir ANDREW CLARK.

MEDICAL advice is constantly sought upon subjects only remotely touched upon in the schools. Advances in surgery, in pathology, and in therapeutics are apt to claim the attention of teachers and of senior students, while much is left for subsequent observation and study. With regard to questions of diet and of climate, this is true to a modified degree only if the subjects are considered as distinct, but the intimate connexion of the two is often wholly ignored even by practitioners of experience. Every young practitioner is ready to draw up sufficiently satisfactory diet tables for the treatment of obesity, of indigestion, or of graver maladies such as diabetes, kidney disease, or typhoid fever. The subject of diet has been dwelt upon so fully in late years that members of the laity have thought it needed the supposed engrossing study of specialists, and to a certain extent the demand has created the supply. There can be little doubt, however, that for most practical purposes knowledge of the general principles is fairly widespread. Most patients, if they would follow instructions faithfully, could get all needful advice connected with diet from their ordinary practitioner. The failure to obtain relief more often follows from lack of perseverance than from faulty instructions. Diet plays such an essential part in the treatment of disease that for any class of practice it cannot be ignored. The details may differ, and undoubtedly must differ, somewhat with the means of the patient, but the underlying principles are the same.

It is otherwise with questions of climate. The majority must put up with the climatic conditions of the land of their birth; hence climatology does not present itself to the bulk of the profession as such an essential part of their training. Still, to many valetudinarians and others October annually presents the problem of seeking suitable winter quarters. Bright sunny weather towards the end of September may delay consideration of the problem, but a few threatenings of fog and gloom, followed by a strong

north wind, with a sudden rapid fall of temperature, bring home the question in an imperative way to those who, for the sake of health, are fortunate enough to be able to change their climate. Most endeavour to follow the flight of the swallow to the South, in the hope of additional hours of sunshine, of increased warmth, but still more, perhaps, in the desire, not always borne out by the result, to attain a climate of a more calculable course. The differences between the temperature during the day and during the night may be greater than would be experienced at home, but this is a small matter if successive days and successive nights present a general similarity, as is so often the case in Egypt; if, in short, variations may be sufficiently reckoned upon to allow of the adoption of suitable clothing for the different hours and of general modifications of the habits of life. The great cause for change, so far as health is concerned, lies in the avoidance of those sudden variations of cold and warmth, of moisture and dryness, with which all dwellers in England are familiar. In the selection of a suitable climate patients seek medical advice as a rule, and this is so well recognised that most medical men are prepared to give some general directions which will be applicable to the requirements of any special disease. It is in these days fairly easy to have a general acquaintance with the subject of climatology and to avoid sending patients from the comforts of home to an uncongenial climate with the discomforts of hotels. But this is not all that is required. Grievous complaints are often made of the impossibility of getting suitable food in the foreign health resorts, and it is to be feared that in some cases at least these complaints are well founded. It must not be forgotten that even the robust frequently find difficulty in adopting foreign food, and that digestive systems accustomed to English cookery revolt when suddenly called upon to cope with some of the marvels of foreign methods. For example, a medical man travelling in the holiday season in Switzerland or in Italy nearly everywhere finds a patient who has fallen a victim in the attem to assimilate an unaccustomed form of diet.

So long as it is the ordinary "tripper who has suffered from imprudence the medical conscience is easy, but when it is an invalid who has been acting under advice, awkward questionings arise. Has sufficient forethought been displayed in gauging the probable effect of the change of diet as well as the change of climate? We are not here referring to the habitual employment of fats in low temperatures and fruits in warmer climes, but rather to the absolute differences which may be experienced in France, in Germany, and in Italy. If these differences will affect healthy people in holidays, they will be apt to produce far greater discomforts in chronic invalids. Another large class liable to suffer consists of children who are sent abroad for their education. In many of these almost irreparable damage may be done by the presentation of unpalatable and unsuitable food at a time when growth is progressing.

The question lies in a nutshell. A heavy responsibility is incurred by all who send patients abroad without due consideration of the conditions of diet together with those of climate. In high altitudes fresh delicacies are often most difficult to obtain, and patients may suffer from the lack of nourishment almost as much as from unsuitable food. Personal experience of diet and of climate must go far beyond knowledge acquired from a mere study of literature. Guide-books and maps have led to patients with heart disease being sent to totally impossible regions, while the same have occasionally led to grievous results when the climate was all that could be desired, but the diet obtainable was coarse in nature. In many health resorts the proprietors of hotels are fully alive to these risks and honestly do their best for sick people. The danger lies rather in sending patients to regions where the desire to cater liberally for the companions of the sick may cause the more moderate but more important requirements of those who are seeking health to be overlooked.

THERE is really no more difficult question, and certainly none that requires the exercise of greater judgment and discretion, than that which deals with the ethics of amusements and the regulation of public morality. It is so easy by a false step and by ill-considered attempts at legislative interference to aggravate and intensify the evils intended to be suppressed or to divert them from one direction into others still more objectionable. The problem underlying the subject with which the Licensing Committee of the London County Council has been recently dealing is, to begin with, one which cannot be publicly handled and discussed in that realistic matter and with that independent frankness of expression with which other subjects are treated. The so-called "social evil" which confronts us in our public streets and thoroughfares has been, in some form or other, common to ancient and modern civilisations alike. The tendency in all nations has been that certain portions of the population should aggregate and form cities, and all experience has shown that certain results—good and bad—are pretty certain to follow wherever people are living together in large communities. One of these results is that they will, among other things, organise methods of providing for their amusement, and it is both natural and right that they should do so. On the other hand, no one with any sense of responsibility would seek to frustrate any well-directed efforts at improving our standard of social morality, much less deliberately write anything calculated to augment an evil which is patent to everybody. We desire, then, to state once for all that we have the utmost respect for all those who are striving in an earnest and sincere spirit to purify society and are not actuated by simple vanity and an ill-concealed love of notoriety or a fanatical impulse to make war on existing arrangements merely in order to carry out their own particular fads regardless of consequences which they have never for a moment stopped to consider.

It is very difficult to know how to deal with a certain class of people who, altogether ignoring human nature, with its cravings and its frailties, would have society regulated on some ideal, but impracticable, moral standard of their own. Take this question of music-halls and such like places of public entertainment. It is not pretended that we can prohibit unfortunates entirely from entering such places. To do so would, indeed, only be to increase the evil and augment the outside scandal of our streets, where this class cannot be subjected to effective control, whereas inside

the music-halls they can be, and are, subjected to some sort of discipline and supervision, and cannot outrage public decorum with comparative impunity. Is it in the least likely to suppress the "strange woman" to turn her from all popular places of amusement and relegate her to the streets? And may she not, moreover, be found more frequently and dangerously in the way there than elsewhere? People who do not approve of music-halls need not go to them, but they cannot help going into the streets.

Again, is all popular amusement—much of which, at any rate, is conducted in a wholesome, decorous fashion—to suffer because the strange woman walks? It is necessary to follow out our principles to a logical conclusion in order to see where they would lead to. Many years ago a system of legislation was in operation which dealt with this unfortunate class of women when they were sick and ailing. We will not advert to the physical side of the question, because that would introduce contentious matter, but from the moral and social side we claim that great good was effected. The unfortunate women themselves were succoured and an opportunity afforded at the same time of influencing them and perhaps reclaiming them through kind treatment. Public decorum, regard for decent behaviour, and the outside aspect of the streets and places under these Acts were vastly improved, and many a vain, weak-principled girl was protected from temptation by fear of the police supervision. What ensued? A label with "State protection of vice" inscribed on it was applied to these efforts, and a political hue and cry against the Acts was raised.

We cannot believe that the "social evil" is to be repressed by closing the promenades of a music-hall or by the partial prohibition of the sale of liquors; nor do we think that the steps proposed to be taken to improve the public morals of London are calculated to effect their object. Rather we suspect that the action adopted by many of its self-constituted and impulsive defenders will be regarded as pharisaism, while we believe that, if all they would apparently have done were done, its effect would be to make things far worse instead of better than they are at present.

Annotations.

"Ne quid nimis."

THE HEALTH OF THE CZAR OF RUSSIA.

THE latest official bulletin is not calculated to relieve the anxiety which is felt regarding the gravity of the Czar's state of health, but there is little doubt that much of the rather miscellaneous information which is published from day to day should be received with great reserve. We are sure that those who are charged with the responsibility of superintending the medical treatment of the Czar, with that fastidious sense of honour which is cosmopolitan, we are glad to believe, among physicians, and must be as much displayed towards the Czar of all the Russias as in the case of any private individual, will consider themselves bound not to divulge the views they may entertain of the exact physical condition of their patient in spite of all public desire, however widespread and natural, for news. The condition of the Czar at the present moment must, therefore, be more or less a matter of speculation or conjecture. It is certain that His Imperial Majesty has been suffering for some time from chronic renal disease, and that as a consequence of the deterioration and impoverishment of blood attendant upon his complaint a general state of perverted tissue nutrition, with physical weakness, impaired digestion and insomnia, has been induced. As our readers know well, this condition is liable to be aggravated by cold, and by anything that tends to depress the action of the skin, while grave complications may be brought about by relatively slight causes. The conflicting accounts of the illustrious patient's progress sufficiently well indicate the unreliability of much of the information; but it is characteristic of his pathological condition that it should be no two consecutive days alike.

THE LONDON VESTRIES AND THE BAKEHOUSES.

THE undesirability of holding the vestries responsible for the sanitary condition of metropolitan bakehouses has been well shown by the result of a conference convened by the vestry of St. George the Martyr to discuss the amendment of the law as it at present affects bakehouses. The meeting was held on Monday last at the Vestry Hall, Borough-road, and delegates from twenty-seven London vestries out of thirty-nine invited attended the conference. From the outset it was evident that a large number of the delegates had decided to resist and resent any interference with the existing law, and the net result of the proceedings was that three hours were wasted in passing resolutions and amendments which nullified each other, the farcical nature of the conference at one time being so obvious that Mr. Wynter Blyth was compelled to move its closure. A proposal to vest the licensing of metropolitan bakehouses in the London County Council met with a storm of indignant opposition, and the language of at least one vestry representative was as guiltless of grammar as of courtesy. One gentleman advised medical officers of health to turn their attention to the discovery of "the microbe of theoretic faddism." Another stated that *his* sanitary committee did not trust to medical officers but visited the bakehouses themselves, for "What do medical officers know?" he asked. "They are all very well in their way, but what do they know about drains?" But the sense of the meeting was with the speaker, as this comical estimate of the range of the medical officer's knowledge met with no serious censure, while the utterance of a delegate who remarked that the majority "seemed to hold briefs for the bakers," which statement he refused to retract, led to his being obliged to leave the meeting. The proceedings at the conference, a report of which will be found on p. 934, did not afford a persuasive object-lesson as to the ability and competence of the London vestries to deal with the question, however much they may resent the suggestion that their powers should be relegated to the London County Council.

FEATHERS, FASHION, AND HUMANITY.

THERE certainly is advantage in protesting where occasion requires, and it will hardly be denied that such an occasion has been provided over and over again by the custom which employs birds and their feathers as dress trimmings. A recent remonstrance by the Selborne Society, we may rest assured, was not uncalled for; it is only fair to note, however, that since its issue at least one disclaimer has been published in reply. In this we find it stated that the bulk of the artificial plumage worn by ladies is manufactured from cheap poultry feathers, that whole birds are usually made-up specimens which never flew in air, and that such once living gems as the humming-bird and kingfisher have practically become extinct in the fashion market. Every humane person will rejoice if these statements can be sustained by proof. We are willing to believe that for the most part they can be. It must be remembered, however, by

readers of the disclaimer just quoted that its character is in truth exculpatory. It is the counter-protest of a feather-wearer, evidently not a technical expert, and it principally deals with what is unexceptionable in the feather trade. The possibility of cruel methods being used in this business is not denied, and we fear there is reason to believe that these, if happily less common than they were, still exist and find employment. If the humming-bird as an ornament is obsolete—which we question—the aigrette is not, and we cannot doubt that the Selborne Society's appeal against the killing of birds during the breeding season is suggested by the well-known conditions under which this form of decoration is obtained. In any case the institution of a close time for birds while breeding, and the prevention of their wholesale slaughter at other times, are measures of protection which can never be objected to, even by the fashionable, if they are also humane.

"THE ELECTRIC LADY."

IN the early years of the eighteenth century, whilst Du Fay and the Abbé Nollet watched with astonishment "the first sparks that were ever drawn from the living body," and long before Kruger had conceived the idea of electro-therapeutics, or Kratzenstein had given that idea form, electrical phenomena were attracting much attention. Many earnest experimenters were investigating the "thing" which, since the days of Gilbert, had come to be called "electricity"; philosophers were gaining a first insight into its possibilities; a new science was quietly winning its way. At the same time the less serious portion of the society of the period, aware of the newly-discovered phenomena, was amusing itself by "drawing sparks" as "electric rain," or "the electric star," or, perhaps, occasionally in the form of the "electric kiss." At the end of the nineteenth century electrical science has made an amazing progress—a progress, however, with which its more frivolous developments seem scarcely to have kept pace. They have, it is true, got beyond the stage of the frictional machine, but it cannot be said that the entertaining young man of the period yet knows how to conjure playfully with currents of "Teslaic" frequency or to amuse an audience by a skilful adaptation of the Hertzian wave. The "penny shocker" is, from the electrical standpoint, a painfully coarse experience of a coil current, and even "the electric lady" of these latter days is, on the whole, a very poor thing. "She is found to be so highly charged with animal electricity that when she immerses her hand in water anyone placing a finger in the bowl at the same time experiences a shock." About the latter there can be no question; the sensation is that of an unmistakable induction current. Neither is it to be denied that she is "charged with electricity." In other words, she is connected with one pole of a large coil kept carefully out of sight and hearing. She places her hand in water; a second person standing "to earth" and doing the same offers a passage to the current through the body, and a fall of potential is the result; but there is no obvious means of completing the circuit. This may surprise those who work only with the ordinary medical coil, but anyone accustomed to larger coils and to so-called "idle pole" work is aware that under such circumstances no metallic connexion with the other pole is necessary. The circuit is completed *viâ* the body of the second person through the ground and so back to the second pole; and the more effectively the latter is "earthed" the more palpable will be the effects in question. This un-polar method is from its medical aspect something more than a mere experiment. It affords a very serviceable method of electrisation. If a person lightly insulated and holding an ordinary moistened electrode attached to one pole of the secondary of a large coil be touched on the forehead by a person standing "to earth," the former will experience a not unpleasant electrical sensation—an effect, however, scarcely perceptible on the arm. But if the "operator" places his foot upon the firegrate (thus making a better earth) the effect is stronger. If, however, the idle pole itself be well "earthed" by being connected to a gas- or water-pipe, then, if the person holding the electrode as above be insulated on glass and be touched as before on the arm, a distinct effect just short of muscular contraction is produced. By altering the amount of the insulation and varying the "earthing" of either pole a variety of electrical effects are obtainable. Muscular contractions of a widely varying strength and cutaneous stimulation of every degree of intensity may be thus secured.

RAILWAY AMBULANCE.

THE public is indebted to Professor Annandale of Edinburgh for a valuable suggestion as to the appropriate means of providing for the surgical and medical emergencies of railway travel. According to the scheme proposed railway companies should devote certain carriages to ambulance work, and these, furnished with all needful appliances, should be stationed at certain points and transferred when required to the scene of an accident. The idea is not an altogether new one. Something of the kind has been already instituted both in this country and in America. We are all familiar with the fact that railway companies employ for certain purposes their own staffs of medical officers, while many employés are conversant with ambulance work, and suitable apparatus has been accumulated at various stations and is in some cases carried on trains in case of need. The extension of this admirable system, and its reduction to the simplest, most practical, and most economical methods consistent with efficiency still remain for accomplishment. The details of Professor Annandale's plan are perhaps hardly so simple as might be desired. To our mind the whole question divides itself for practical solution into two main sections—service at stations and service on the line in case of accident. A sufficiency of ordinary surgical appliances; a subsidised local practitioner, or more than one if needful, paid a fixed fee for each service rendered; a duly instructed body of employés—every railway servant should be able to render first aid—would satisfy all usual requirements in the former case. Accidents on the line should be provided for by a like arrangement, with the difference that needful instruments, &c., should be carried in the guard's van, or preferably in a part of some compartment in the middle of the train; while medical aid should be summoned wherever available at a fixed charge, as in police cases. The above plan is subject, of course, to modification; but it appears to us to present a fair example of the method most likely to meet the several conditions essential to a highly desirable reform.

OPERATIONS FOR THE SUSPENSION OF THE RETROFLEXED UTERUS.

THE third volume of the Johns Hopkins Hospital Reports contains a paper under this heading by Dr. Howard A. Kelly. He objects to the terms "ventrofixation" and "hysteropexy" as applied to these operations, because in his experience some months after the operation the uterus is found not to be fixed, but, on the contrary, to be freely movable in a position of anteflexion; it appears to have no direct organic connexion with the abdominal wall except by long, attenuated adhesions. Dr. Kelly suggests "suspensio uteri" as a suitable name for the operation. He considers that there are two methods by which the uterus may be efficiently suspended—firstly by two ligatures of silk or silkworm gut passed on either side through the peritoneum and subjacent tissue about 2 cm. from the abdominal incision and parallel to it, and then round each utero-ovarian ligament respectively, when they are tied,

raising the uterus into a position of anteflexion. The other method consists in passing two silk sutures through the peritoneum and subperitoneal tissue in a transverse direction, and about 1·5 cm. from the incision. The suture is then carried through a part of the body of the uterus or its posterior surface near the fundus, and then through the peritoneum, as on the opposite side. The two ends of the suture are brought out of the incision and tied, bringing the uterus and anterior abdominal wall into close apposition. A similar suture passed immediately below the first is found sufficient to keep the uterus in place. In the paper referred to forty-five cases are recorded in which an operation for suspending the uterus was performed. There were no deaths. Dr. Kelly knows of no case in which the uterus has been suspended either by the utero-ovarian ligaments, or by its posterior fundal surface, in which the retro-displacement has recurred. He considers that there are two distinct classes of cases in which the operation has proved of service: firstly, in young nulliparæ suffering from pelvic pressure, backache, and dysmenorrhœa in whom the retroflexion has existed for a number of years; and secondly in multiparæ, in whom the retroflexion is acquired. Some brief particulars are given of twenty-one of the forty-five cases operated on. More information would have been desirable, inasmuch as the after-history furnishes the justification, or otherwise, for performing operations of this class. In four out of the twenty-one cases there is no note whatever as to the effect on the symptoms. In eleven out of the remaining seventeen cases the patients were better after than before the operation. In three cases the patients were no better after than before the operation, and in three others it seems very doubtful if there was any improvement. It is, of course, extremely difficult to say, as regards the cases in which improvement followed the operation, what part should be assigned to the operation in producing the result. The lapse of time and possible improvement of the general health may fairly be cited as influential factors that are not to be lost sight of. On the whole, the case for hysteropexy, or rather, as Dr. Kelly prefers to call it, "suspensio utero," still seems to us not to have been made out. His cases, however, we are glad to see, fulfilled one condition that should at all events be regarded as an essential one for operations of election, which are more or less of an experimental nature—that is to say, they were attended with no mortality.

MEDICAL OFFICERS OF HEALTH AND NOTIFICATION RETURNS.

THE medical officer of health of Sedgley has been in correspondence with the Local Government Board on the question of his not being allowed to inspect the sick room in a case of typhoid fever of which he had received notification; and it would also appear from the correspondence that he asked whether he might not regard such a case as so far involving nuisance as to give him right of entry. The Local Government Board have once more answered very definitely that in the majority of instances in which cases of infectious diseases are notified there is no need for a medical officer of health to personally inspect the apartment set apart for the sick person; and that in the remaining instances, where such visit may become necessary, it should be remembered that, apart from cases to which Section 102 of the Public Health Act, 1875, may be applicable, this can only be done with the consent of those having charge of the patient, and that the coöperation of the medical practitioner of the case should be secured if possible. In short, where arrangements cannot be made for inspection in a friendly way, this can only be required or enforced after complaint on oath before a justice and the issue by him of an order of entry. On the further question as to nuisance, the central authority give the only possible answer—namely, that they do not regard the existence of every case of notified infectious disease as necessarily involving reasonable cause to suspect the existence of nuisance on premises such as is contemplated by the section of the Public Health Act above referred to. We trust that this answer, which is so obviously in accord with common sense, public opinion, and the traditions of the medical profession, will be accepted as finally settling the points raised; and that no medical officers of health will attempt to gain access to sick persons and sick rooms which are in the charge of other medical practitioners merely because they happen to have received information of the existence of infectious disease under an Act which, as has so often been explained, was never intended to—and, as a matter of fact, does not—give them any additional powers, but merely adds to the sources of their information.

THE WARD AND LABORATORY—"OPEN TO THE PUBLIC."

WITHOUT in any way desiring to see a reversion to mediæval conceptions of medicine and its pursuit, it may yet be permitted us to question seriously the utility, as well as the desirability, of the now common practice of publishing details of medical science in the columns of non-scientific journals. If, whenever a new line of treatment of a disease is introduced, the fact is to be announced to the public and reported on in detail by the journalist, the effect on newspaper readers in general can hardly be salutary. Some it will disgust, in others it may satisfy an ignorant curiosity, while others again may be led by it to false hopes—indeed, there can be none outside the circle of those who have had a medical training who can appreciate the work in question or benefit by the information they receive. And these naturally would rather rely on a first-hand account of the trials than on the gossip of an "interviewer." Still more objectionable is the reproduction of such illustrations as those which appeared in a London contemporary the other day, which are not only valueless *per se*, but absolutely misleading to the layman. We do not question the good intentions of the journal or its contributor, but we do say that this course is unwise and harmful.

THE DIFFUSION OF SMALL-POX.

THE condition of the metropolis as to small-pox continues to be eminently satisfactory. The number of fresh cases notified last week was as low as 9, whilst not one death from the disease was registered, and the patients remaining under treatment on Saturday last in the various institutions in London were in point of numbers fewer than has been the case for several months past—namely, 63—against 100, 98, and 84 on the three preceding Saturdays. Only 8 cases were admitted during the week, against 23, 14, and 11 in the three weeks preceding. That a steady decrease is in question is shown by the returns of the Metropolitan Asylums Board, the cases admitted in the fortnight ended Sept. 27th having been 36, and in the succeeding two weeks only 25. In the period of 1893 corresponding to this latter fortnight the admissions were 32, and in 1892 only 1. A few stray cases are reported from the western counties, but nothing of moment. In the Midlands some grave allegations have been made against the Bilston Commissioners in the matter of the provision of hospital accommodation, it being alleged that the small-pox hospital and the cottage hospital for the isolation of other diseases are within a stone's throw one of the other, and that a scarlet fever patient has contracted small-pox and has for that reason been transferred to the small-pox hospital. A further allegation is that small-pox patients have been permitted to leave the hospital after a sojourn of only some seven to ten days. Matters do not seem to mend very much at Birmingham, where fresh cases of

small-pox to the number of over a score were heard of last week, together with two registered deaths. Aston Manor was also visited, and Smethwick had several attacks to chronicle, as was also the case at some other places not far away. Willenhall has not, fortunately, had much to report recently, the cases in the first week of October numbering only 3; and great interest has locally been taken in the endeavour to raise a sum of money for the widows and orphans of those bread-winners who have died from the disease. At Liverpool Dr. Hope was able at the beginning of this month to give a satisfactory report with regard to the localisation of small-pox in that city, the cases heard of since the previous meeting of the Health Committee being all from a circumscribed area. They numbered 17, and only 5 had been notified by medical men, as many as 12 being traced by by the staff of the committee. Last week 3 deaths were registered, and the new cases were 24 in number. Small-pox does not seem to be yet exterminated in Dublin, where there had occurred up to the end of September 185 cases with 18 deaths.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

A QUARTERLY COURT of the directors of this Society was held on Wednesday, Oct. 10th, at 11, Chandos-street, W. The President, Sir James Paget, took the chair at 8.30 P.M. Three new members were elected, and the deaths of two ordinary members and one honorary member were reported. Applications for relief were read from fifty-three widows, nine orphans, and four orphans on the Copeland Fund, and the sum of £1173 10s. was recommended to be distributed, according to the urgency of each case, at the next court. It was resolved that a present of £5 to each widow, £2 to each orphan, and £5 each to the four orphans on the Copeland Fund should be made at Christmas. The death of a widow was announced who had been in receipt of grants since 1865, and who had received £1180 from the Society, the husband having subscribed the sum of £28. A special grant of £26 to a widow was recommended to be made at the next annual general meeting.

UNHEALTHY HOUSES.

THE Birmingham Town Council are proceeding with vigour against the owners of houses unfit for human habitation, and last week application was made to the magistrates for closing orders for forty-two houses which Dr. Hill, the medical officer of health, had represented as unfit for human habitation. The conditions which led Dr. Hill to this conclusion were much the same as those for which closing orders have been sought in London and elsewhere. The houses were damp, dirty, and dilapidated, and in some the ceilings were low and the rooms very small. The magistrates granted the necessary orders in a number of cases, and in others they adjourned the hearing of the cases with the object of inspecting the houses before giving a decision. If the sanitary authority are able to make the Housing of the Working Classes Act an effective weapon in Birmingham the owners of insanitary property will not await the proceedings of the authority, but will themselves maintain their houses in proper condition. We hope there will be no difficulty in the way of thus raising the standard of house property in Birmingham. The sanitary authority of Bristol have to contend with the serious difficulty of back-to-back houses. It was stated last week at a meeting of the committee that there were about 1000 such houses in that city. The duty, therefore, of dealing with them is one that does not brook delay, for no doubt attaches to the question whether back-to-back houses are unhealthy habitations. Manchester has been face to face with the same problem, and the town council received some time ago from their late medical officer of health (Dr. Tatham) a very excellent report on the subject which makes very practical suggestions for dealing with it. It is difficult to understand that many urban authorities are allowing the construction of such houses while other authorities are considering how they may best rid themselves of those which exist in their towns. London is, as a whole, very free from back-to-back houses, and the London County Council is now dealing with an area faulty in this respect; it may be expected, therefore, that by degrees they will be entirely removed. Some of the blocks of artisans' dwellings, however, somewhat recently erected contain tenements having this faulty construction. The London building law of the present time will do much to prevent the further erection of houses thus planned.

DEATH OF MR. R. W. SAVAGE, LIBRARIAN OF THE OBSTETRICAL SOCIETY.

WE regret to announce the death of Mr. Richard Wade Savage, who for seventeen years was the zealous and able librarian of the Obstetrical Society. In addition to his duties as librarian, Mr. Savage was the general executive officer of the Society, and the heavy and constantly increasing work in connexion with the Society's midwifery examinations fell upon him. In the discharge of his official work he always displayed in a marked degree the virtues of punctuality and of method. For some time his health had been failing, and two and a half years ago he suffered from a severe double pneumonia from which it was not expected he would recover. A cold contracted during his summer holiday was the immediate cause of his death, which took place at his home on Oct. 11th. Mr. Savage, whose father was a medical practitioner, was one of the first pupils at Epsom, and was only forty-nine at the time of his death.

RECURRENT OCULO-MOTOR PARALYSIS.

IN a recent number of the *Boston Medical and Surgical Journal* Dr. Coombs Knapp records a case of this curious condition. The patient was a man aged forty-one, whose mother had at times apparently been insane and whose sister was subject to neuralgia. In his previous health there had been nothing of importance except an attack of gonorrhœa, and the fact that he was subject to pains in his knees in the spring and to attacks of tonsillitis. About a year before he was seen he had a severe attack of pain in the left side of the head, accompanied with nausea, vomiting, numbness of the part of the face affected, and ptosis. He also saw the eye turned outwards when he lifted the lid, and there was diplopia. The trouble lasted seven weeks, and then all the symptoms ceased and the eye and face resumed their normal appearance. About ten months later there was another similar attack, and when seen towards the end of this there was comparatively little pain, but the face near the eye was extremely sensitive to the lightest touch. There was complete ptosis of the left eyelid, and the pupil was dilated and immobile, and the eye turned outwards. Sensibility was diminished over the upper part of the left side of the face. Pressure over this area was painful. Treatment by iodides, mercury, phenacetine, aconitine, and galvanism was tried. Nothing seemed to have much influence on the diseased condition, which slowly subsided. About two months after he was first seen the movements had become normal, and the diplopia had disappeared. He was then lost sight of and had not been seen again. In the concluding part of his paper Dr. Coombs Knapp gives a *résumé* of the chief features in cases of recurrent third nerve paralysis which he has found in literature—twenty-nine in all. The attacks by some are supposed to be of the nature of migraine, but there seems reason to doubt this. The prognosis is bad, for as a

rule the paralysis becomes permanent, at least in some degree. Treatment so far has not been successful in doing anything more than perhaps mitigating the symptoms, and the pathology in the great majority of cases remains obscure.

"DOCTOREIN."

WANTED, a handy and convenient name for the "lady doctor." A discussion having for its aim the discovery of an appropriate title to take the place of the awkward terms "lady doctor," "woman doctor," "female practitioner," &c., has been started in the *Glasgow Daily Herald*. "Doctor" indicates the male practitioner; "doctoress" is felt to be inadmissible. "Doctorein," plainly of quasi-German parentage, is suggested. "Doctorein Mary Walker" would be distinctive enough, but slightly clumsy and un-English. The irreverent correspondent thinks it reminiscent of margarine—an objection which may weigh with the students of the Glasgow Queen Margaret College.

THE CHARGES AGAINST THE HANLEY, STOKE, AND FENTON JOINT HOSPITALS.

WE have already referred to this case as it presented itself to the Stoke committee at an early stage, and found that the charges made were for the most part vague and unsubstantiated. At the full meeting of the board, including all the representative authorities, the evidence has been fully investigated and considered, with the result that Mr. Alderman Hammersley moved that, in the opinion of the board, the charges made were not well founded, and that the board expressed its continued confidence in the manner in which the duties were attended to by the medical officer, matron, and nursing staff of the institution. This motion was seconded by Mr. T. Bill (Stoke Rural), and was carried by 13 votes to 2. We congratulate Mr. Phillips, the matron, and the nursing staff on this triumphant vindication of their management.

GLIOMATOSIS OF THE SPINAL CORD.

IN the *Journal of Nervous and Mental Diseases* Dr. Dana has an interesting article dealing with this subject. The case which formed the text of his paper was that of a patient with the following history. He was a German thirty-five years of age who was admitted to hospital in October, 1891. He had been a healthy man with a good history until fifteen months before his admission; he then began to have pain extending down his right leg, dull in character as a rule, but occasionally becoming sharp. The leg felt numb and heavy, and it ultimately became weak and stiff. After he had suffered in this way for some time he suddenly lost power in both legs, and for three months he was confined to bed suffering from paraplegia. Physical examination at this time disclosed a healthy condition of the viscera. There was much exaggeration of reflexes, both deep and superficial. Both legs were very weak and stiff, but more especially the right one. There was anæsthesia, most marked in the right leg, extending up to the level of the twelfth dorsal spine, but no muscular atrophy. Nine months later there was total paralysis of motor power and sensibility, with great exaggeration of the reflexes. Anæsthesia as before extended up to the level of the twelfth dorsal spine. He had paroxysms of intense pain across the abdomen and severe headaches. He slept very badly and gradually became weaker, until he succumbed about two and a half years after the onset of his symptoms. At the necropsy there was found a fusiform enlargement of the spinal cord greatest at the level of the eighth dorsal segment, extending vertically for about two and a half inches in each direction. The cord was increased to twice its usual size, but showed no external change in appearance apart from this. A solid clot was found in its centre, destroying nearly all the cord tissue, and leaving only its margin as a periphery. The patient had apparently suffered from central glioma, beginning in the neighbourhood of the ninth and tenth dorsal segments, and there had been a hæmorrhage in this part early in the history of the case, giving rise to the paraplegia from which the patient had suffered. He had partly recovered from this, but the process continued, and finally another hæmorrhage had occurred, which had produced the paraplegia and severe pain from which the patient suffered at the end. Dr. Dana, n conclusion, argues in favour of a change in the nomenclature of conditions similar to this, and suggests the substitution of the term "gliosis" or "gliomatosis" for that of syringomyelia.

THE ENTRIES AT THE MEDICAL SCHOOLS.

THE returns respecting the number of students who have entered the various medical schools of the metropolis are now nearly complete, and we have received the following additions to the list given in our issue of last week. University College shows a return of 41 full medical students, and Westminster Hospital a total of 26 new entries. The number of general students at Guy's Hospital is 89, and the new entries of general students at King's College are 28. St. Thomas's Hospital shows an enrolment of 49 new general students, the same class of students at St. Bartholomew's Hospital numbering 119. Of the provincial schools, Durham University has enrolled 36 new general students, Mason College 30, and the general students at Owens College, Birmingham, number 43. University College, Liverpool, and University College, Bristol, have respectively 5 and 25 general entries. Next week we propose to give a general analysis of the entries.

THE PHYSIOLOGICAL EFFECTS OF CYCLING.

THE physiological effects of cycling have recently been studied by Dr. Blazhevich of St. Petersburg, who publishes his results in his "Graduation Dissertation."[1] He tabulates 270 observations on 104 individuals of both sexes and various ages, distinguishing between ordinary riders and those who train themselves for, and ride in, races or attempt to cover long distances. He finds that the play of the chest is diminished immediately after riding, especially in the cases of women and children and of men racing or commencing cycling, the diminution amounting in these cases to from 1 to 1·5 centimetres. In men accustomed to the exercise the effect was scarcely perceptible. The general effect of the summer's riding upon the male votaries of the sport was, according to Dr. Blazhevich, practically *nil*. In women and children the effect was slightly to increase the vital capacity. The arm power was found to have increased more than the leg power in young persons and in beginners, but in the case of men of mature age who had previously been accustomed to cycling this was not so evident. Speaking generally, the effects of cycling on the system were found to be very similar to the phenomena noticed by Tsymkovski[2] in soldiers who had been running, and by Gruzdeff[3] and Passover[4] as resulting from rowing.

WILLS AND CHARITIES.

THE question as to what should be done with our earthly possessions after death is one which not the most unselfish of mankind can ignore, and the great majority of men and women are not oblivious of their obligations in this particular. If in any case they should appear forgetful kind relatives, if they be near, will usually assist their memory. "Will" is a term admirably descriptive of the final allotment of property in its personal relation. It is instructive of much. The real man is nowhere better

[1] St. Petersburg, No. 86, 1893-94.
[2] Vrach, No. 16, 1889. [3] Ibid., No. 60, 1889.
[4] Dissertation, 1893.

known than in his final testament. His character, his opinions, beliefs, regard for other men, purposes, hopes, disappointments, hobbies, all find expression here. Happy is the man, especially if he be wealthy, who knows how to shape the future of the goods he must relinquish. We are disposed to treat the rich man's obligations somewhat liberally. First of claims, naturally comes that of the family. With some men it is last as well as first; with others, admittedly unnatural in their neglect, it finds no place. First it stands, nevertheless, in the law and custom of all time. But there remains in many instances an additional and substantial tribute which is not and need not be thus absorbed. In the assignment of this residue a man's true character will usually make itself apparent: it is as if his ideal of life were minted in his gift. To one man his fellow's barren mind requiring cultivation will especially appeal; to another it is such a mind in its mystical attitude of soul or spirit, helpless of means to connect it with the inspiring centre of all good; with a third, the physical or social aspects of life will present themselves as most urgently in need of material amelioration. Each project is in its way a worthy one, and our times, no less than those which have preceded them, can point to examples which at every turn in life's road stand out as the signs of brotherhood and generosity. May this continue, and the recent munificent grants to certain Manchester Hospitals from the "David Lewis Fund"; the bequest of £12,000 to the Lincoln County Hospital by the late Miss Ana Well, and the charitable will of the late Mr. Edward Hollingworth Penfold show that our institutions for the benefit of the sick poor are suffering from no present neglect.

DIPHTHERIA IN LONDON.

JUDGED of by the returns of mortality, the records for last week show a decline in the epidemicity of diphtheria in the metropolis. The deaths registered from the disease, which had been 67 and 66 in the two preceding weeks, fell last week to 54, a decline of some 18 per cent. They, however, exceeded the corrected decennial average for the week by 19, and were widely distributed over London, 9 belonging to Camberwell, 4 each to St. Pancras and Lambeth, and 3 each to Hackney, Islington, and Mile-end Old Town districts. The admitted cases numbered 106, and showed an increase over the two previous returns, which were 90 and 98 respectively. On Saturday last the number of diphtheria patients remaining under treatment was 521, a rise of 26, 25, and 19 on the three preceding weeks. Thus, attacks have shown disposition to increase, though the fatal form has diminished. Taking the fortnight ended Oct. 11th, we find from the returns of the Metropolitan Asylums Board that the notified cases of the disease in London numbered 479 as compared with 499 in the previous two weeks, but that the cases under treatment in the hospitals of the Board rose from 411 to 448, the accommodation for the treatment of the disease probably accounting for this increase. It was only on the second day of this present month that the beds available were equal to the demand made on them for many days previously; and two wards, containing forty-eight beds, are to be given up for the treatment of the disease by the Fountain Hospital in consequence of the pressure on the accommodation in other institutions. Of diphtheria in its non-fatal form there is without doubt more just now than in like periods of the past two years in London, the figures being for the fortnight ended the 11th inst. and the corresponding fortnights in 1893 and 1892 thus: Cases admitted in 1894, 448; in 1893, 276; and in 1892, 305. But with deaths it is far otherwise as compared with last year, the data being for July, 1893, 244, and for July, 1894, 176 deaths; for August, 1893, 302, and for August, 1894, 252 deaths; for September, 1893, 314, and for September, 1894, 213 deaths; for the first two weeks of October, 1893, 160, and for those of October, 1894, 120 deaths; and for the whole period of fifteen weeks in 1893, 1020, and in 1894 761 deaths, the latter being upwards of 25 per cent. below the records of 1893. It would thus appear that we have this year to deal with a disease of a milder form.

THE HEALTH OF THE AMIR OF AFGHANISTAN.

IT is a somewhat remarkable coincidence that two rulers—the Czar of Russia and the Amir of Afghanistan—on whom the maintenance of peace so greatly depends should be suffering at the same time from a similar malady. The exact nature of the Amir's illness and his present condition are not officially known, but there is every reason to believe that His Highness is suffering from some complication of an acute kind arising out of chronic renal disease, and that he is seriously ill. He has repeatedly suffered from gout, and occasionally from attacks of fever, probably of malarious origin; and if it be true, as alleged, that internal hæmorrhage is one of the symptoms of his present illness it is quite possible that this may be attributable to some visceral congestion the result of chill and previous climatic disease. Malarial fevers are of common occurrence in the Peshawar Valley and the Khyber at this season. It must be remembered that in the winter of 1890 His Highness was in a very serious state from gout and renal and other complications. The report on his case in our columns from the pen of his English medical attendant stated that there was "gout in every joint." The right shoulder, elbow, wrist, and knee were particularly affected, while the serious complications of pleurisy and cystitis, with albuminuria, were present. Such a condition three and a half years ago must inevitably lead us to regard a recurrence of any of the symptoms, whether complicated or not by malaria, with much apprehension. The gravest issue may well be anticipated. Officers of the medical staff who took part in the late Afghan campaigns, and possess a knowledge of that country and an acquaintance with its different hill tribes and factions, will readily appreciate the gravity and political significance of this news. The personal influence of the Amir—who is known to be a firm but just ruler and a man of decision and ability—with the various tribes in Afghanistan is very considerable, and the cessation of his rule might easily lead to serious political complications.

THE EPIDEMIC AT THE RICHMOND LUNATIC ASYLUM, DUBLIN.

THE epidemic that has broken out among the patients of the Richmond District Asylum, Dublin, appears, from information we have received, to be identical in its clinical features with beri-beri. There have been altogether about 150 cases, of which seventeen were fatal. Eighty-five cases are still under treatment. We are informed that, speaking generally, the cases have presented themselves under the subacute form (Scheube) or mixed type of Da Sylva Lima. The earlier cases appeared to begin with œdema of the legs. In many cases this passed off, and after a brief period wasting and tenderness of the calf muscles appeared, and the patient passed into the dry atrophic or paralytic stage. In some cases, however, the œdema became general and extreme. Death has usually resulted from œdema of the lungs, sometimes from heart failure (occasionally rather sudden), never from laryngeal trouble. Ascites is rare, pleural effusion common, hydro-pericardium occasional. The characteristic heart symptoms are usually well marked. Peripheral neuritic conditions are well marked in the lower extremities; in only one case have they been well marked in the upper. Not infrequently cases which have passed through an initial "wet" period of well-marked œdema and have become wasted

and paralytic become again œdematous, and this return to the wet type is usually an unfavourable omen. We are informed that the convulsive form of Pekelharing has not occurred. Nothing resembling beri-beri has heretofore been observed in Dublin. The cause of the present outbreak appears to be obscure. That it is associated with overcrowding and bad hygienic conditions seems to be the opinion of Mr. Conolly Norman, the medical superintendent, who in reporting on the epidemic reminded his committee of the constant "iterance" with which he has drawn attention to the dangerous overcrowding in the institution. We hear that the asylum is not adapted to receive more than 1000 patients, and that the actual number of patients is 1500. This is very bad, and beri-beri is undoubtedly a disease of congested and unhealthy populations; but it is not easy to see how it can have originated *de novo* in a temperate climate. In this connexion it is interesting to observe that Mr. Norman draws attention to the existence of dysentery, often accompanied by abscess of liver, as an endemic in the Richmond Asylum.

THE UNIVERSITY OF DURHAM.

THE opening of the University of Durham College of Medicine, Newcastle-on-Tyne, for the winter session must alway be regarded by the profession in the north of England as an interesting event. It brings before the community the achievements of the institution in their midst, for the Newcastle College of Medicine, within the compass of a generation has developed from the smallest of local origins to be one of the most successful of the medical schools in England. The resignation of Dean Lake, the Warden of Durham University, gave particular interest to the recent ceremony. The President of the College of Medicine, Professor Philipson, announced the fact that the Dean of Durham was occupying his official place among them for the last time, and referred in graceful language to the valuable services which he, as Warden of Durham University, had rendered to the Faculty of Medicine of the University, furthering its advance and development in every manner during the past quarter of a century. All interested in the University in any capacity must feel Dean Lake's resignation to be a matter of the very deepest regret. The Warden of Durham University has been, in Dr. Philipson's words, the pioneer of higher education in northern England.

THE FATAL CASE OF CHOLERA ATTRIBUTED TO INFECTION IN A LABORATORY.

FULL details of the fatal attack of cholera to which Dr. Oergel, assistant at the Hamburg Hygienic Institute, succumbed on Sept. 21st are published by Dr. Reincke.[1] The illness commenced with slight prodromal diarrhœa, which passed into typical cholera on Sept. 15th, when Dr. Oergel was attacked with vomiting, cramps, and rice-water evacuations. He was removed to the Ellendorf Hospital in a state of collapse, and, in spite of all attention, passed gradually into a comatose state, pneumonia subsequently supervening. Bacteriological examination of the dejecta on each day showed abundant cholera vibrios; and the results of the post-mortem examination were confirmatory of the diagnosis of the illness. In endeavouring to trace the precise etiology of the case Dr. Reincke was unable to arrive at any distinct evidence of the manner of Dr. Oergel's infection. The latter himself believed that this occurred on Sept. 12th, when he accidentally swallowed some water which had been sent from Thorn for examination; but it was shown that this water was free from any cholera organisms, although it was suggested that perhaps the specimen he was dealing with may have been contaminated with the cholera cultures with which he was then engaged. Another suggestion was that he was infected whilst making these experiments with serum, some of which (highly charged with vibrios) on one occasion spurted into his mouth. Against this is the fact that this accident, when he immediately washed out his mouth, occurred on the 12th—viz., some days subsequent to the first diarrhœal symptoms. Dr. Reincke thinks that Dr. Oergel was infected in his laboratory work, which was at the time largely concerned with cholera investigation; but he says, as in other cases of laboratory infection, that it is only possible to rest content with this general fact. Dr. Reincke trusts that this lamentable event may not be wholly in vain, if it act as a warning to those who still believe that cholera organisms can be handled with impunity. Dr. Oergel, who was twenty-nine years of age at the time of his death, had formerly been assistant to Professor Löffler at Greifswald, and was appointed to his Hamburg post in 1893.

[1] Deutsche Med. Wochensch., Oct. 11th.

THE September issue of the *Bristol Medico-Chirurgical Journal* is distinguished by an ably written account of the recent meeting of the British Medical Association in that city, in which the writer points out certain defects, but on the whole speaks in appreciative terms of the several features of the gathering, the general meetings, addresses, sectional work, and the serial festivities that contributed so largely to the success of the meeting.

WE are pleased to learn that the Queen has conferred on Leander Starr Jameson, M.D.Lond., the honour of a Companionship of the Bath. Dr. Jameson, to whose work we have previously alluded, is the well-known and vigorous Administrator for the British South Africa Company in Mashonaland and Matabeleland, and has undoubtedly worked for our country in a way that merited recognition.

THE German Hospital at Dalston celebrated its jubilee on Monday last, and at the same time the thirtieth birthday of its present building; for the charity was founded in 1843, and the present erection was opened on Oct. 15th, 1864, by His Royal Highness the Duke of Cambridge.

DR. LOUIS VINTRAS has been elected physician to the French Hospital (Hôpital et Dispensaire Français, Shaftesbury-avenue) in the place of Dr. Armand Ruffer, who has resigned.

HIS Grace the Archbishop of York has accepted the Presidency of the Church Sanitary Association.

DR. TEMPEST ANDERSON, of York, is the new sheriff-elect for that ancient city.

THE ABERNETHIAN SOCIETY OF ST. BARTHOLOMEW'S HOSPITAL.

INAUGURAL ADDRESS BY SIR JAMES PAGET, BART., F.R.S.

THE inaugural meeting of the session of the Abernethian Society was held on Thursday evening, Oct. 11th, in the anatomical theatre of St. Bartholomew's Hospital, when Sir James Paget, F.R.S., delivered an address on the Scientific Study and Practice of Medicine and Surgery.

Mr. E. W. CROSS, President of the Society, in introducing Sir James Paget, remarked that they were that night celebrating the hundredth anniversary of the Abernethian Society, the oldest institution of its kind in the metropolis. Mr. Cross then introduced the speaker of the evening, remarking that to "Bart.'s men" Sir James Paget did not need much introduction, so closely had he remained connected with his old school.

Sir JAMES PAGET, who was warmly cheered on rising,

animadverted not only on this being the hundredth year of the society, but on the fact that he was now attending the opening of its winter session after sixty years of membership. He thought that there had never, or at any rate, very rarely, been an instance of anybody delivering addresses to the same society at so great an interval as that of sixty years. There might be some, but few. He said that had he known that this was such an important occasion as the centenary of the society he would have come prepared to give some account of its origin and growth, and some biographical references to the great man whose name the society took, for not only was he one of the greatest scientists of his time, but as a writer of good, honest English he might even in these enlightened days be taken as a literary model. So long a period had elapsed since his (the speaker's) connexion with the Abernethian Society began, that he might, if he thus dwelt on general matters, become reminiscent, and so occupy the time of his audience with matter other than the subject of his address. It had long been said that science and practice were incompatible; this was utterly absurd and unworthy of the belief of thoughtful men. Science and practice should go hand in hand: a man could be a scientist and a general practitioner at the same time; in fact, there had always been some men in the rank and file of the medical profession who had contributed in no mean degree to the discovery of new facts in pathology and therapeutics, and at no period had there been more of these than at the present time. There needed to be more men who made their practice contribute to their science, rather than their science to their practice, and the lecturer thought that this majority was yearly nearer to becoming an accomplished ideal. The medical profession needed more facts, more really ascertained and tested facts, and the only way to obtain these was by trying the so-called facts over and over again before taking them as granted. Sir James Paget next dwelt on the difficulty presented by the enormous number of "variables"; perhaps no science presented so many as did human pathology. No two persons accurately resembled one another, no two heads, no two kidneys, no two stomachs, and even no two thumbs were exactly alike. Detectives studied these dissimilarities; why should not medical men do so in greater measure? It would be well if the profession imitated them more closely in many respects. If kidneys, stomachs, &c. were so widely different in a normal state, and still more in a morbid state, how much more widely must they differ under the artificial conditions produced by the actions of medicines. He recommended his listeners to take as a motto the words of John Hunter, "*Don't think, try—be accurate, be patient*" Where, it might be asked, were practitioners to look for facts? His answer was, anywhere, everywhere, for all around us were things that nobody had observed or had taken the trouble to investigate. To prove this, men had only to observe the new diseases and new phases of old diseases which were being yearly discovered, and the facts concerning them which were being continually added to our storehouses of knowledge. An example known to most of those present struck him as a peculiarly good one to illustrate his meaning. The disease known as "myxœdema" was first observed only twenty years ago by the late Sir William Gull, and the result of this observation was that, though at that time little or nothing was known as to the thyroid gland, they had now a much larger knowledge of that organ than of many others in the body of probably greater importance in the human economy. In recommending the practitioner to select a subject for investigation, the lecturer advised his audience to choose one of those for the study of which their daily work gave them the greatest opportunities, and was thus the field in which they might best add to the knowledge possessed by their profession. Sir James Paget pointed out two lines of inquiry, which of all others might be better worked out in private practice than in the wards of a large hospital. The first of these was the study of the characters of mixed diseases. In the case of two hereditary diseases such as tuberculosis and cancer, what was the result in the offspring when one parent was suffering from cancer and the other was tuberculous? A tuberculous father and a cancerous mother, or *vice versâ* —were these diseases each exclusive or did they mingle? Were they incompatible? This problem awaited earnest study. It was well to observe closely the somewhat neglected study of "family diseases"; lamentably little was at present known about heredity, and by the careful noticing of details much might be learned. The second line of research was the more perfect inquiry into the action of drugs on various organs of the body. Every year new substances were presented to us and asserted, often empirically, to be of value in certain cases and in certain diseases; a practitioner with a really scientific mind would never believe such assertions based only on some physiological reason, until he had by careful testing become himself convinced of their value. We had heard much about the "fallacies of medicine." These were in reality nothing more or less than "fallacies of diagnosis." A drug might produce beneficial effects in one case of a certain malady, and be altogether useless in another; fallacy of diagnosis might here be suspected, and possibly under one name several maladies were being classed. If he defined scientific study as a collection of hard facts he might be accused of taking a low estimate of its importance; but deductions from insufficient data, and confusion of already ascertained facts, were only to be overcome by the careful accumulation and classification of tested and acknowledged conclusions. An instance in which a valuable drug had nearly fallen into disuse in certain cases through insufficient observation of facts was that of mercury, which was believed to cure paraplegia. Now in some cases it failed to do so; this puzzled experts until it was found that when the paraplegia arose from syphilitic disease of the spine it was cured by mercury, but that when it arose from some other cause that drug was useless. That unpleasant and harassing complaint which took the form of a succession of boils might arise from several causes and might be successfully treated according to its origin: if malarial, quinine was indicated; if gouty, liquor potassæ; whereas in yet another modification the administration of yeast was recommended. This testified to the dangers of the "fallacies of diagnosis." He did not wish to depreciate the value of theory in science, but he suggested that all the sciences must work together, as rivals perhaps, but never as enemies; no one of them was self-sufficient, no one but needed the friendly help of the others; but he warned his hearers against accepting statements from the faculties of other sciences without full examination. A physiologist should not with blind faith accept the statement of the chemist, or the chemist that of the physiologist. This investigation was necessary, and the scientific temper which prompted it was equally essential to the true study of the practice of medicine and surgery. Finally, Sir James Paget somewhat surprised his audience by recommending them all to be detectives, always to be on the watch, for whom nothing could be too trivial or unimportant. Let them all exert to the fullest of their power the detective spirit in the tracking out and conviction of disease.

Sir James Paget resumed his seat amidst prolonged and enthusiastic cheering from the crowded audience of students and practitioners who filled the theatre.

A vote of thanks was moved by Mr. Howard Marsh and seconded by Mr. Anthony Bowlby, and was received with befitting acclamation.

Sir James Paget made a short reply, and the meeting terminated.

THE SELECT COMMITTEE ON FOOD PRODUCTS ADULTERATION.

WE have received a copy of the Blue-book containing the report from the Select Committee on Food Products Adulteration. The committee was appointed "to inquire into the working of the Margarine Act and the Sale of Food and Drugs Act, 1875, and any Acts amending the same, and to report whether any, and if so what, amendments of the law relating to adulteration are, in their opinion, desirable." The proceedings commenced on June 25th and ceased with the Parliamentary Session on Aug. 1st, between which dates the committee held nine sittings and heard the evidence of eight witnesses. The following are the words of the report agreed to: "Your committee find that at this late period of the Session it is not in their power to conclude their inquiry. They have therefore agreed to report the evidence already taken to the House, and to recommend that a committee on the same subject be appointed in the next Session of Parliament."

Although the minutes of evidence contained in this report can be but a tithe of the complete hearing, yet already there are unmistakable indications of the direction in which reform in the present administration of the Acts is most needed.

Indeed, the evidence already given has, we venture to think, laid bare the chief shortcomings of the Act, and it is a satisfaction to us to find that the views we have expressed from time to time in our columns in regard to the causes of failure have been very substantially confirmed in the evidence of several authoritative witnesses recently examined before the committee. Thus, we have severely commented upon the dilatoriness of the local authorities to exercise their powers in obtaining samples for analysis.[1] In many districts, some showing a population of between 30,000 and 60,000, not one sample of analysis was taken last year, while in other places the number of samples was so small as to afford no security against adulteration. According to the evidence of Mr. Preston Thomas, general inspector to the Local Government Board, this neglect to put the Act into operation rests entirely with the local authorities; and it is remarkable that where the Local Government Board have directed the attention of the authorities to the fact that the Act is not properly enforced this homily has produced, in most instances, absolutely no result. Still more remarkable is it to learn that the Local Government Board have no further power in this matter; they have no compulsory powers, the administration of the Act being left at the discretion of the local authorities entirely. Is it surprising under these circumstances that the Act in many districts "has been reduced to a dead letter"? More serious does this appear when we find the opinion expressed that wherever the Act is efficiently carried out it has a very remarkable effect in reducing the amount of adulteration. The enormous decrease in the adulteration of pepper and vinegar through the zeal of the authorities is a case in point.

We have frequently animadverted on the present system of collecting samples by inspectors, and we have expressed the opinion that the Act is often evaded because the inspector procuring the samples is well known to the vendors. That there is reason for supposing such to be the case is clearly shown by the fact that when samples are obtained by private individuals the proportion of adulterated articles far exceeds those obtained officially. Thus in the returns last year it was shown that in the inspectors' cases the amount of adulterated samples was 12·4 per cent., but in the private cases it was 38 per cent. The inadequacies of fines inflicted by magistrates, more especially in the case of milk prosecutions, we have also urged as a factor calculated to render the Act void. This leniency may sometimes be ascribed to the fact that it is often very poor persons who sell the milk, but, as the chief inspector of the Local Government Board stated, a great many flourishing dairymen "get fined and fined over and over again, and it pays them to continue to adulterate and go on paying the fine." The retailing of water at 4*d.* a quart is obviously a profitable business.

The committee have already had placed before them a mass of valuable evidence in regard to the question of the detection of added water in milk. As might be expected, the opinions on this matter are conflicting. The difficulty lies in distinguishing between rich diluted milk and the milk coming from poorly fed or old cows. The necessity of taking some precise and definite steps so as to make the administration of the Acts more effectual in regard to this important article of diet is obvious when the increasing number of disputed cases of milk adulteration which occur again and again at the courts is taken into consideration. The danger of adopting a fixed standard of quality consists in the fact that rich milks, on the one hand, could be watered down to a low standard, while, on the other, if the standard were high, a genuine but poor quality milk would be regarded as adulterated with water, and an injustice might be committed. If the milk sold to the public were known to be mixed—that is, the product of the mixed milks obtained from a herd of cows—then doubtless a standard could be advantageously and justifiably adopted. In this connexion the evidence of one witness (a farmer) would appear to be conclusive. He showed that a certain large dairy company which sends 2000 gallons of milk to London daily which is the produce of sixteen herds of dairy shorthorns is required to supply milk according to contract which shall contain not less than 3·25 per cent. fat and 8·75 per cent. non-fatty solids. As a matter of fact, the milk supplied has shown that the average for six years had been 3·84 per cent. fat and 8·92 per cent. non-fatty solids. But we are confronted with the perfectly just argument of the case of the poor cowkeeper, who for his supply of milk depends solely upon a single cow, in which case the milk might on some occasions prove to be pure, though of poor quality. He has not the chance possessed by large dairy companies of averaging the composition of the milk by mixing the poor quality yielded by one cow with the rich quality yielded by another. Still the bulk of the milk supplied to London is undoubtedly the mixed product of herds of cows. In the case of a single cow being kept, however, there can surely be no difficulty for the inspector to ascertain that fact and to inform if need be the analyst to that effect, who, if he deemed it desirable, might obtain a sample drawn from the cow in his presence to ascertain whether the poor quality of the milk might be referred to the cow or its keeper.

Coming to questions such as the adoption of standards for drugs, the qualifications which it is desirable analysts appointed under the Act should possess, and the system under which at present samples are referred to the chemists at Somerset House, we need say little at present, especially as these are subjects upon which the bulk of evidence from analysts, traders, and others has yet to be heard. We may refer, however, to what we have already advocated on some of these points. Thus we venture to suggest that public analysts should possess a practical qualification, such as that which the Institute of Chemistry grants; that the chemists at Somerset House should be required to make analyses which they are thoroughly competent to do, but that these results should be submitted to, and the interpretation left with, a court of experts; and finally that some definite rules founded on the results of investigation should be drawn up relating to the composition and assay of drugs. It will be seen from this imperfect sketch of the preliminary proceedings, which occupy some 200 pages of the Blue-book, that the inquiry has assumed growing importance as it has proceeded. Already, as we have shown, it has been productive in furnishing important and substantial evidence of grave discrepancies existing in the Act as it is at present administered. We await with keen interest the publication of further evidence, and the eventual legislative steps and amendments which the committee will be led to recommend.

[1] Compare THE LANCET, March 9th, 1889; Aug. 1st, Oct. 3rd, and Nov. 28th, 1891; Nov. 12th, 1892; and Feb. 25th, 1893.

CHOLERA.

CURRENT NOTES, COMMENTS, AND CRITICISM.

THERE is happily but little to be chronicled this week regarding cholera, which continues to prevail, however, to some extent in Russia, although the returns show that the number attacked has greatly diminished.

Cholera has almost entirely disappeared in Galicia, and the restrictive measures imposed on the Austro-German frontier during the epidemic have been removed. It is reported from Vienna, however, that there was a fresh manifestation of the disease at Cracow, 4 cases and 2 deaths having quite recently occurred there.

The disease has been very prevalent in India during the last three years, and if it has not been so widespread this year it has, nevertheless, been of a virulent type. The outbreak in the East Lancashire Regiment at Lucknow (to which we have previously referred) was especially severe, entailing a terrible loss of life in the corps, notwithstanding that the troops were presumably sent into camp as soon as practicable, in accordance with the regulations and practice always followed in India. The disease disappeared soon after the removal of the regiment from their cantonments, and there has been no recurrence of it since their return to barracks. That the outbreak in the Lucknow garrison was almost entirely confined to the East Lancashire Regiment, and that it disappeared on the evacuation of the barracks occupied by that corps and did not reappear on their re-occupation, are very noteworthy points, because they are by no means isolated or rare occurrences in the history of cholera in India; on the contrary, the Indian Government has based its practical procedure in regard to this disease on the experience they have gained from outbreaks of a similar kind. It is confessedly difficult to explain these facts altogether by any of the existing theories regarding cholera. To deny that water-contamination plays a very important part in the spread of cholera is to deny the value of accumulated evidence and

repeated experience; still, this will not explain all that is obscure in connexion with this disease. Those who adopt this as their sole and exclusive doctrine have still to account for the fact that one year cholera is confined to India, and that another year its march extends over a large part of the globe. They have to account for the manifest influence of season on its vitality and development; for numerous isolated sporadic cases that occur in barracks with the same water-supply in common and for outbreaks in villages and institutions with sources of water-supply perfectly separate and distinct from one another; and for the influence which local and topographical, as well as environing personal, conditions—such as overcrowding &c.—undoubtedly exercise on the incidence and spread of the disease, to say nothing of the apparent immunity from cholera which many places have hitherto exhibited, notwithstanding that they are as much exposed as their neighbours to the risks of its introduction. These are, however, occurrences which will probably be cleared up in the course of time; meanwhile we are, or we should be, all agreed as to the paramount importance of a good, wholesome water-supply, protected from all contamination; and, for the rest, we are of opinion that the medical department of the Local Government Board in this country deserve great credit for the wisdom of the course they have adopted and followed during this cholera epidemic, and quite as much, perhaps, for what they have so judiciously abstained from doing as for what they have actually done.

CONFERENCE ON LONDON BAKEHOUSES.

A CONFERENCE of vestries and district boards, convened by the vestry of St. George the Martyr, Southwark, was held in the Vestry Hall, Borough-road, on Monday last, Oct. 15th.

Mr. Nevill, Chairman of the Public Health Committee of the parish of St. George the Martyr, who presided, explained that the Conference was the outcome of a circular written by the members of the Marylebone Vestry with reference to the amendment of the law regulating bakehouses. The vestry of St. George the Martyr issued invitations to thirty-nine different boards, and twenty-seven signified their intention of being represented. Five had written expressing their belief that the present state of the law was sufficient to deal with the matter. As a basis for discussion the Public Health Committee of St. George the Martyr suggested for consideration the following resolutions:—

"1. That the present state of the law relating to bakehouses requires amendment by the addition of the following clauses to the Public Health (London) Act, 1891:—"(*a*) That uniform metropolitan by-laws regulating bakehouses be made by the London County Council and be confirmed by the Local Government Board, and that the duty of enforcing these by-laws shall devolve upon the various local sanitary authorities; (*b*) that such by-laws shall cover the regulation of the conduct of the business, the structure of the premises, and the mode in which application is to be made for sanction to establish anew the business of a baker in the county of London; (*c*) that the portions of the by-laws regulating the structure of bakehouses do not apply to existing bakeries until after the lapse of a certain number of years; (*d*) that it should be rendered an offence to occupy as a bakehouse any cellar or place almost or altogether below the level of the street, unless it had been so occupied before and up to a certain fixed date; (*e*) that all metropolitan bakehouses be compulsorily licensed, and that the granting of the licences be vested in the London County Council."

"2. That a clause be inserted in the Bill to amend and extend the law relating to factories and workshops now before Parliament, limiting the maximum number of hours of labour of adult bakers to seventy-two weekly.

"3. That a deputation consisting of delegates of this Conference wait upon the Secretary of State for the Home Department and the President of the Local Government Board and of the Board of Trade, to urge upon them the appointment of a Select Committee of the House of Commons to inquire into the sufficiency of the existing law relating to bakehouses."

On the motion of Mr. Wynter Blyth (Marylebone), seconded by Mr. Willett (Chelsea), Clause *a*. of the first resolution was carried by 22 votes to 3. The adoption of Clause *b*. was also moved by Mr. Wynter Blyth and was seconded by Mr. S. R. Lovett (St. Giles). An animated discussion ensued, in which objection was taken to the words "the conduct of business" as being too elastic. Mr. Wynter Blyth suggested that they no doubt meant the enforcement of by-laws similar to those already in force with respect to dairies—namely, to prevent persons suffering from infectious diseases serving in the shops, and so forth.

Dr. Waldo was clamorously called upon to express his views on the matter, but he explained that he wished to learn the views of other vestries. He was in favour of the whole of Clause *b*. as it stood. Eventually Clause *b*. was struck out.

At this point Mr. Wynter Blyth said: "The Conference has degenerated into a mere farce. I propose that the meeting be closed." This suggestion, however, was not agreed to, and amidst considerable excitement Mr. Rumball (St. Luke's) moved that the first clause be rescinded. This not receiving the approval of the meeting, an amendment to delete the last ten words from Clause *c*. was next put. This was agreed to, and the clause as amended was carried.

On the discussion of Clause *d*. Mr. Wynter Blyth moved an amendment which, on being itself amended, was carried and read as follows: "That the London County Council be empowered to frame by-laws for the construction of underground bakehouses. That all bakehouses erected after the passing of such by-laws shall conform thereto."

Clause *e*. was received with bitter opposition. Mr. Ackroyd (Bermondsey) remarked that this clause was the only reasonable suggestion now on the agenda paper, and was really necessary, as, with one or two exceptions, the delegates seemed to hold briefs for the bakers. Mr. Rumball protested that this remark was an insult to the delegates and demanded the withdrawal of the expression, and one excited representative stigmatised Mr. Ackroyd's words as "unwarrantable impudence and abominable cheek." After some hesitation the Chairman ruled that the words were out of order and called upon Mr. Ackroyd to withdraw them. This he refused to do and left the meeting. The clause under discussion on being put to the meeting was almost unanimously defeated.

Resolution 2 was negatived, and a hasty vote of thanks to the Chairman prevented the discussion of Resolution III. The proceedings then terminated.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on the 11th inst., the President, Mr. J. W. Hulke, F.R.S., in the chair.

On the recommendation of the Museum Committee it was resolved that £100 should be expended in purchasing the collection of skulls of the Anthropological Institute.

The committee appointed to prepare a report to be presented to the Fellows and Members at the meeting to be held on Nov. 1st next presented a draft report, which was considered and adopted. The report records the work done by the College in its various departments during the past collegiate year ending July 12th, 1894. The committee also presented the rules which they had drawn up for the conduct of the meetings of Fellows and Members. They are as follows:—

1. A meeting of Fellows and Members shall be summoned annually for the Thursday following the ordinary meeting of the Council in November, or for such other time as the Council may determine.

2. Other meetings may be summoned, either with or without a requisition, at such times and for such objects as may by the Council be thought desirable.

3. Such requisition shall be signed by not less than thirty Fellow and Members, or Fellows or Members and shall contain a statement of the object or objects for which the meeting is requested.

4. At the annual meeting the report of the Council shall be presented.

5. Motions introduced by Fellows or Members (*a*) shall have direct reference to the object or objects for which the meeting has been summoned; (*b*) shall be signed by the mover, or the mover and other Fellows or Members; (*c*) shall be received by the Secretary not less than ten days before the meeting.

6. The President shall determine what motions are in order and direct the arrangement of the agenda.

7. The quorum of each meeting shall be thirty, and if at the expiration of fifteen minutes from the hour for which the meeting has been summoned a quorum be not present the meeting shall not take place. If after the commencement of the meeting it shall be found upon a count that a quorum be not present the meeting shall be dissolved.

8. The President or one of the Vice-presidents, or in their absence the senior member of the Council present, shall be chairman of the meeting, and the chairman's decision shall be final upon all points of order which may arise.

9. Notice of each meeting shall be given by advertisement.

10. The agenda paper shall be prepared three days before the meeting, and shall be issued to any Fellow or Member who shall have applied for it.

11. A record of the proceedings shall be kept by the Secretary.

The committee further recommend that the title and first clause of Section VIII. of the Regulations of the Council should be altered in the following manner, viz :—

Present Regulation.	*Proposed Regulation*
SECTION VIII.	SECTION VIII.
Annual Meeting of Fellows and Members.	*Annual Report of the Council.*
1. An annual meeting of the Fellows and Members shall be called, to which a report from the Council shall be presented.	1. A report to the Fellows and Members shall be made annually by the Council.

These rules cannot come into force until next year.

The Council elected Dr. Edward Seaton as examiner for Part II. of the Examination in Public Health.

The Committee of Management of the Conjoint Examining Board presented a report, which was approved and adopted, but the adoption of the recommendations is subject to the approval of the Royal College of Physicians of London. The recommendations are as follows :—

1. That the following institutions be added to the list of recognised places of instruction in Chemistry, Physics, Practical Chemistry, and Biology : The Hartley Institution, Southampton ; the School of Science, Technology, and Art, Liverpool ; the Technical School, Huddersfield ; and the Science, Art, and Technical School, Plymouth.

2. That the University of New Zealand be added to the list of Universities recognised under the conditions of Paragraph V., Section III., of the Regulations dated Oct. 1st, 1884, and of Paragraph IV., Section III., of the Regulations dated Jan. 1st, 1892

3. That on the application of the Board of the London Hospital Medical College the course of clinical demonstrations in lunacy given by Dr. J. Kennedy Will at the Bethnal House Asylum, Bethnal-green, be recognised so long as he shall hold the lectureship on Mental Diseases in that medical college.

4. That on the application of the honorary secretaries of the Metropolitan Branch of the British Medical Association the whole of the Examination Hall buildings, exclusive of the offices and of the workrooms in the laboratories, be placed at the disposal of the British Medical Association for their annual meeting during the week commencing July 28th, 1895, on payment of expenses for lighting, cleaning, attendance, &c.

Mr. Bryant was re-elected to the Committee of Management of the Conjoint Examining Board, and Mr. Bowlby to the Laboratories Committee. The Jenks' Scholarship Committee reported to the Council that Mr. Thomas Chetwood of St. Bartholomew's Hospital had been nominated as the Jenks' Scholar. The report was entered on the minutes. This is the second time that the award has been made.

A letter was read from the Dental Section of the Board of Examiners in Dental Surgery recommending that candidates rejected for the diploma should be required to produce certificates of additional study to the satisfaction of their teachers before presenting themselves for re-examination. The matter was referred to the Board of Examiners in Dental Surgery to consider and report. A letter was read from the President and Secretaries of the Indian Medical Congress to be held in Calcutta from Dec. 24th to Dec. 29th next, inviting the College to send a delegate to the Congress. Mr. A. E. Durham was appointed as a delegate from the College.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE PORT OF LONDON.

THE report of Dr. W. Collingridge, medical officer of health for the Port of London, for the half-year ending June 30th last shows that sanitary inspection was carried out on 12,018 vessels during that period, this being an increase on the previous half-year of about 600. Of these, 85·5 per cent. were of British nationality, 5·45 being Scandinavian. Of this number 471 were found to require cleaning ; 419 required some structural alteration, of which 9 affected ventilation, 236 lighting and heating, and 23 the carriage or storage of water. These figures show the value of continuous sanitary supervision, and also the readiness with which shipowners adopt suggestions when shown to be necessary. With reference to the medical inspection of ships arriving in the port, it is remarked that while the present plan of inspection was instituted during a time when the danger of importation of cholera from the Continent threatened, it is not from that plague that such a system serves as a protection so much as from other infectious diseases, less dreaded, but none the less serious. The question of cholera is a commercial one, and the existence of an epidemic would be so serious a calamity, from damage to commerce, that reasonable precautions must be kept up at any cost. This cost, however, is small, and the amount expended may be fairly considered in the light of an insurance against loss.

During the half-year 4807 vessels from "foreign" ports were visited by the medical officers stationed at Gravesend in conjunction with Her Majesty's Customs. Of this number 652 were medically inspected, involving the individual examination of passengers and crews to the number of 12,514 persons. The system has proved most valuable in arresting cases of imported disease. While from 1883-91 (when there was no medical inspection) the average number of cases removed annually at Gravesend was 5·5, during the last half-year 35 cases were so dealt with ; therefore disease has been more rife or more cases are intercepted, and experience of the futility of trusting to statements of masters as to the nature of disease is sufficient to prove the latter alternative as the only feasible explanation. The question of the permanent adoption of such a system is now under consideration by the Government. By order of the Local Government Board of Sept. 6th, 1892, medical officers of health were empowered—in order to minimise the importation of disease—to refuse the landing of any person who might be in a filthy or unwholesome condition, or who could not give a satisfactory address. In the case of Jewish immigrants who were not in a filthy condition, but being strangers had no address, an agreement was entered into with the authorities of the Jewish shelter to retain these people or verify the address to which they wished to go. Unhappily, the agreement was carried out in a most perfunctory style, and a conference was called at which the Local Government Board, the port sanitary authority, and the Jews' Shelter were represented, when a fresh agreement was drawn up, which is now in force.

Eleven cases of small-pox occurred during the half-year, and attention is drawn to the fact that the majority of these cases are unvaccinated persons. Of these cases 6 were received into the authority's own hospital, which also received 6 cases of enteric fever, 9 of measles, 5 of scarlet fever, 1 of diarrhœa, and 10 of chicken-pox. These 37 patients remained in hospital various periods, amounting to a total period of 633 days, or an average of 17·1 days to each patient, or 34 patients under treatment each day, the average cost per head for actual maintenance being 1*s.* 8*d.* per day.

The report indicates the necessity for by-laws requiring the registration of (1) barges engaged in the carriage of offensive materials ; (2) to ensure the proper covering of the cargo ; (3) to limit the hours of discharge ; and (4) to fix the minimum distance from dwelling-houses at which discharge may take place.

The seizures of food during the half-year amounted to 2328 carcases of mutton, 16,314 cases of fruit, 81 cases of eggs, and sundry smaller quantities. With reference to canal boats, 474 were inspected registered for 1336 persons, but only occupied by 916. Violations of the regulations were found to the number of 41, of which 35 have since

been remedied. In three cases proceedings were taken and convictions obtained in each instance.

THE SEVENTEENTH REPORT OF THE COMMISSIONERS OF PRISONS.

IT is now seventeen years since the Prison Act of 1877 placed all local prisons under Government. The main objects of this Act were: (1) uniformity in prison treatment, which was impossible when there were 113 different bodies administering the prisons; and (2) reduction of cost of prisons by reducing their number—this was also impossible when every prison authority had a right to maintain its own prison. The seventeenth report of the Commissioners of Prisons for the year ending March 31st last has been published and contains many interesting details, from which the following have been selected. The number of prisoners received during the year in local prisons under sentence of the ordinary courts was 156,466, besides 1766 soldiers and sailors sentenced by courts-martial. There were also 9818 imprisoned as debtors or on civil process, making a total of 168,050. The corresponding numbers of the previous year were 145,538, 1599, 10,031: total, 157,168, thus showing a marked increase. The population of the prisons on March 31st last was 14,339, against 13,971 in the previous year. A table gives the remarkable reduction in the daily average number of prisoners since 1877. For the six months ending March 31st, 1878, it was 20,833. With one exception there was a steady fall till 1892, when it was 12,663. After that it rose the next year to 13,178, and this year to 13,850. The numbers for the last five years would be still lower but for the prisoners formerly sent to military prisons who are now serving their time in civil prisons. Passing from these to details more interesting in a medical aspect, we find a return of mournful interest—the number of sentenced prisoners of each sex in custody in the local prisons on a certain day for drunkenness, whether in connexion with any other crime or not. The total number, 1444, is nearly 11 per cent. of the total number under sentence of imprisonment in prison on that day. The proportion of women, 521 out of 2289, is very much larger than that of men, which latter is 923 out of 10,936. At Liverpool the females were in excess, there being 57 females to 38 males, while the Metropolitan prisons had 119 females to 107 males, and at Strangeways (Manchester) the number of females nearly approached that of the males—101 to 123. From an inquiry made by the chaplain of Holloway Prison it appears that the age of eighteen is a fatal age for wrong-doing, the number of burglars of that age being larger than at any other, the youngest being twelve and the oldest seventy-five.

The number of deaths from natural causes during the year was 111, or 7·6 per 1000 of the daily average population. Sixty prisoners were released on medical grounds, exclusive of pregnancy, being at the rate of 4·1 per 1000. Assuming that all the prisoners released on medical grounds died within the year, and adding these releases to the actual deaths, the rate of mortality for the year would be under 12 per 1000; but, as Dr. R. M. Gover, the medical inspector, remarks: "To count all the releases on medical grounds as deaths is, however, unfair to the prisons, seeing that prisoners are frequently released for diseases that may not prove fatal, as stricture, chronic abscess, debility, abdominal tumour, cataract, paralysis, infectious diseases, and so forth. A deduction of at least 25 per cent. for these cases should be made before the influence of releases on medical grounds on the death-rate can be accurately estimated. Making that deduction, the death-rate per 1000 per annum for the last six years may be fairly represented by the figure 10·9."

Five prisoners committed suicide during the year, being a less number by three than the annual mean for the last six years. Two of these five prisoners were awaiting trial; of the three remaining one committed suicide on the seventh day, one on the fourteenth day, and one in the sixth week after reception. These facts tend to prove that which was shown formerly by careful inquiry—viz., that the tendency to commit suicide among the inmates of English and Welsh prisons was greatest during the early weeks of imprisonment, and that a large percentage of the prisoners who committed the act were waiting for trial. The prisoners certified or reported as insane during the year numbered 554, and of these 282 were recognised as being insane upon reception. There are many other matters of great interest in this report, the consideration of which must, however, be left for another opportunity.

OPENING OF THE MEDICAL FACULTY CLASSES IN EDINBURGH.

THE medical classes in Edinburgh—at the University, the various extra-mural schools, and the women's schools—were opened on the 9th instant. There is no general gathering together of students to listen to a general address either at the University or at any of the buildings in the city devoted to medical education. The lecturers as a rule only address a few introductory sentences to their classes, welcoming the men back to work, recommending text-books, or counselling diligence and regularity. In the University Professor Greenfield was absent from his post through illness, his place being temporarily occupied by his senior assistant, Dr. Muir; and in the infirmary his duties are being performed by Dr. Philip, the assistant physician attached to his wards. In the class of Practice of Medicine Professor Sir Thomas Grainger Stewart addressed the students on the Progress of Medical Science. He welcomed them to the study of the practice of physic, which might be regarded as one of the culminations in the attainment of which they had spent laborious years. The practice of physic was the study of nature, and in that class the students had to acquire knowledge of that particular branch of natural history which consisted in the study of individual diseases and their causes, and in addition what could be done by interfering with morbid processes for the benefit of patients. They must acquire a good method of observation, and if they wanted to do well in medicine they must be methodical. He then went on to show that medicine was making headway in its battle with disease and death. This was shown by the decreasing mortality. In the treatment of phthisis results were improving, and means were being obtained of dealing with tuberculosis generally. A great deal had been done towards extirpating typhoid fever, and evidence was gathering in favour of the value of the antitoxin treatment of diphtheria. As confirming his general contention he showed that, while the mortality of Edinburgh was about 26 per 1000 in 1864, it was less than 17 per 1000 now, and it was still falling. He had no doubt that in a few years they would see the city death-rate down to 16 or 15 per 1000 or even lower, although he did not expect to see the ideal of 5 per 1000, which some people aimed at. Some diseases had almost disappeared, and epidemics did not sweep over the country as formerly.

In the class of Physiology Professor Rutherford spoke of the Methods of Physiological Study. Having been a teacher of science for thirty years, and having studied in the schools of different countries, he hoped he had earned some title to pronounce an opinion on the methods of scientific education. The primary requirement of the student was the creation of an intellectual atmosphere in which his mind could work with ease, and he considered that mere attendance at a school or university went far to create such an atmosphere. A general atmosphere, however, was not enough: there must be the creation of a special atmosphere, and there was no method by which this could be so readily and fully created as by systematic courses of lectures. The assembling together to be collectively addressed was itself of value. The tutorial method of teaching was extremely useful as a supplement to some systematic courses of instruction; but when used as a substitute for systematic courses of lectures, as was the case to a large extent in some universities, the result, he thought, was not to the permanent advantage of the student. Tutorial teaching tended to degenerate into "grinding" and was hostile to the sustained exposition which was the distinctive feature of the lecture. He hoped that in the Scottish universities the systematic lectures might never be curtailed and replaced by tutorial teaching; and he believed that if such ever came to pass it would be because professors had failed to keep their lectures in touch with the immediate as well as the ultimate requirements of the student. The immediate requirement of the student was that he should pass his examinations, but his ultimate and highest

requirement for the successful practice of medicine was that his mind should be so trained in scientific modes of thought that he might be enabled to rightly use the knowledge he had gained. He referred to the value of practical studies, and also to that of the scientific use of the imagination in the study of a subject like physiology.

Professor Fraser, in the class of Materia Medica, dwelt on the History of the Science and Practice of Medicine. He also criticised adversely the arrangement which had been made compelling students to take up materia medica before studying pathology and physiology &c.

In the class of Midwifery Professor Simpson commented on the importance of that subject and the part which it played in the life of the general practitioner.

AN ITALIAN DISINFECTING STATION FOR THE LEVANT.

(FROM OUR SPECIAL CORRESPONDENT IN ITALY.)

RECENTLY, in the Syracusan waters, in presence of the Commendatore Pagliani, Director-General of Public Health, and of a numerous representation of authorities, medical and municipal, a disinfecting station was opened to serve as a model for the construction or rehabilitation of others to be kept by the Italian Government in readiness for the reception and treatment of crews and passengers hailing, during the prevalence of cholera, from suspected seaports.

The station is the so-called "Stazione Sanitaria d'Augusta." It rises on the site of one of two abandoned forts which were built in 1565 by the then Viceroy of Sicily, Don Garcia di Toledo. This fort was called the "Vittoria"; the other, now utilised as a coaling-station for the Italian Navy, takes its name from its constructor.

The transformation of the "Vittoria" into a lazzaretto has been effected with skill and success, thanks mainly to Cavaliere Fichera, engineer and director of the works. It is approached from the western aspect of the island by a large gateway, which is surrounded by a marble tablet bearing the words: "Salus populi suprema lex." Its ground floor accommodates the more menial of the *personnel* attached to the lazzaretto and is also reserved for storage rooms and laundry. It has likewise a crane, destined to withdraw from the cargoes of vessels *in contumacià* the linen and utensils supposed to be infected. It is provided with a "columbarium" (for the ashes of cremated bodies); a deadhouse for necropsies; and a crematorium designed by Cavaliere Fichera. The upper floor is divided into two parts—that to the right of the entrance serving as a hospital with its accessory rooms, that to the left being set apart for disinfection and for baths. Every room in the hospital contains two beds, with bolsters; iron tables and seats; and a ventilator situated on the level of the pavement for the admission of pure air, together with a self-acting apparatus to facilitate the escape of the air that has become vitiated. Both are regulated in relation to the velocity of the external air. Nearly all the rooms are provided with wash-hand stands, each having a metal syphon, through which the water is supplied free from all contact with drains. The reservoirs of water are situated above, at a height of thirty metres. They are refilled by means of pumps in communication, on the outside, with floating cisterns. The disinfecting branch of the building contains two departments: one for infected persons, the other for the disinfecting processes. In the former there are two disrobing-rooms, one destined for men, the other for women. In these disrobing-rooms the crews and passengers of suspected vessels undress. Through a hatch they consign their wearing-apparel to the person in charge, who places them in an oven. They then pass, naked, into the bath-room, which is constructed of marble and arranged for douching on the automatic principle. Subsequently they proceed to a dressing-room, in the disinfecting department, where they find and resume their disinfected clothes. The disinfecting machine is furnished by the Moleschott firm of Rome (the representatives of which are kinsmen of the great Dutch physiologist, recently removed by death from the chair of the Institute of Medicine in the Sapienza). It consists of a great iron cask with "serpentini," through which is introduced the vapour generated by a boiler at a pressure of three atmospheres and a half, and which, within the oven, develops a heat of 120° C. The drainage is effected by tubes of *grès*, and is well supplied with ventilators, which rise to the roof. At each "head" of the drain there is a small tank with a capacity of fifty litres, which discharges itself in two seconds, to flush the interior. Then it refills automatically, again to discharge itself as before.

This establishment, which serves as a model for the other sanitary stations in Italian waters, is, as I have said, the work mainly of the engineer Cavaliere Fichera, who has spared no pains to make it worthy of the new departure taken by Italy in applied hygiene.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Anomalous Illness characterised by Broncho-pneumonia and Sore-throat, by Dr. BRUCE LOW.—This outbreak occurred during the month of April last in the parish of Laxfield, Suffolk. The parish contains rather over 900 inhabitants, who are mainly centred in a village forming one broad street, skirted by the river Blythe, which rises in the parish, where it is but a small brook. When the disease was first heard of it was considered that the symptoms very much resembled those which Dr. Bruce Low had described in an epidemic at Raunds, Northamptonshire, in 1891. The disease attacked 66 persons living in thirty-two households, and there were 6 deaths. In the main the sufferers were children; indeed, in a tabular statement as to age-incidence it is shown that all but 3 were under fifteen years of age and that the majority were under five years. The fatal attacks all occurred under three years of age. The earliest symptom, as a rule, was vomiting; then followed drowsiness, febrile disturbance with a temperature of about 103° F., the respiration was difficult, and there were cough, headache, sore-throat, and diarrhœa. The sore-throat was, as a rule, a very obvious feature. In some cases there was stiffness about the neck, and even retraction of the head. During convalescence there were at times epistaxis, discharges from the nose and ears, profuse sweating, enlargement of the cervical glands, and herpes of the lips. The lung mischief was of all varieties, from simple bronchial catarrh to acute bronchitis and broncho-pneumonia, and in 23 instances the mischief was very definite. These more definite cases were nearly all children. In 3 cases there was an eruption like that of scarlet fever but it was in patches. A rash resembling scarlet fever had also been observed in the Northamptonshire outbreak of 1891, and the same had taken place elsewhere in localities where similar outbreaks had occurred. The outbreak would also appear to have been infectious. Thus of the thirty-two houses attacked there were from 2 to 5 cases per house in fifteen instances. Dr. Bruce Low evidently received from Mr. Biden of Laxfield much valuable help in investigating this outbreak; he also received similar help from others when he carried out further inquiry as to the existence of similar symptoms in neighbouring districts. After giving an account of this part of the inquiry, Dr. Bruce Low places in parallel columns the manifestations observed at Raunds in 1891 and at Laxfield in 1894, and he comes to the obvious conclusion that in the main the two outbreaks resembled each other in their clinical features. Reverting to the Laxfield epidemic, study is made as to its relation with meteorological conditions; but this part of the subject led to no positive results. The possible identity of the outbreak with influenza is next discussed; and it is evident that the age-incidence of the disease is regarded as a distinct difficulty in accepting this view. Incidentally, Dr. Bruce Low records the view of Mr. Jeaffreson of Framlingham, to the effect that it was an acute phase of a malady which he had styled "herpetic fever," which he believed was due to a specific poison, and which had been prevalent off and on in the district since 1882. It would also seem to be Mr. Jeaffreson's opinion that some of the mischief in the mouth and about the fauces of some of the patients, including those who had no herpes on the exterior of the lips, was due to crops of herpes inside the mouth. The possible relation of the disease to rötheln and to cerebro-spinal fever is also discussed. In connexion with the latter disease

it will be remembered that in the report of the medical officer of the Local Government Board for 1888 there was an account by Dr. Thorne Thorne of a movement of epidemic cerebro-spinal meningitis westwards and into the basin of the Mediterranean, and that two years later, in the report for 1890, Dr. Bruce Low submitted a paper and report on localised occurrences of that disease in the eastern counties of England. Dr. Bruce Low reverts to some of these experiences, and, though he admits that no definite conclusion can be arrived at, he refers anew to the view that possibly epidemic influenza may have been, so to speak, a "sport" of cerebro-spinal fever, and he recalls in this connexion the strong suspicion of a "nervous" element in the Laxfield cases. The report is of much interest, and we are glad it has been placed on sale.[1]

Grave scarlet fever epidemic at Hucknall Torkard.—Dr. Thomas Horne's report contains the story of a very severe prevalence of scarlet fever in Hucknall Torkard. The place had not been free from that disease for years past, but in 1893 the malady assumed epidemic proportions. The urban sanitary authority had not adopted the Infectious Diseases (Notification) Act, and they remained therefore ignorant as to the precise extent of the mischief which was going on in their midst; but if the estimate of 10 or 11 per cent. of deaths can be accepted as fairly accurate then the number of deaths would show that in a population of about 14,000 there had been in the fourteen months antecedent to Dr. Horne's visit no less than some 1000 cases of this disease. It is also estimated that of the 1000 attacks no less than 604 occurred in children under five years of age, and other 306 in children aged between five and ten years; and on the basis of this estimate it would appear that the scarlet fever attack-rate in Hucknall Torkard was 272 on 0—5 years and 152 on 5—10 years per 1000 living respectively at those age-groups. Facilities for the spread of the disease were numerous. Few or no precautions were deemed necessary by the mining population; many culpably neglect precautions, and others seemed to think exposure to infection desirable so as to get the disease over. School attendances also favoured diffusion of the infection. And, again, the district was without any hospital for the isolation of infectious diseases. The educational effect upon the population of the adoption of the notification system and of the provision of a first instalment of an isolation hospital would probably be of considerable value, even if the effect were but slowly developed; but, with such an organisation and such habits as now obtain in this urban district, the prevention of infection seems to be hopeless, whatever the sanitary officials may attempt in this direction.[2]

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5860 births and 3346 deaths were registered during the week ending Oct. 13th. The annual rate of mortality in these towns, which had been 16·1 and 16·0 per 1000 in the preceding two weeks, rose again last week to 16·7. In London the rate was 15·5 per 1000, while it averaged 17·5 in the thirty-two provincial towns. The lowest rates in these towns were 9·3 in Croydon, 11·4 in Norwich and in Birkenhead, 11·9 in Brighton, and 12·7 in Leicester; the highest rates were 20·3 in Manchester, 22·2 in Gateshead, 23·1 in Liverpool, 23·4 in Bolton, and 26·2 in Preston. The 3346 deaths included 406 which were referred to the principal zymotic diseases, against 421 and 362 in the preceding two weeks; of these, 117 resulted from diarrhœa, 92 from diphtheria, 61 from "fever" (principally enteric), 61 from measles, 38 from scarlet fever, 32 from whooping-cough, and 5 from small-pox. No fatal case of any of these diseases was recorded last week in Plymouth; in the other towns they caused the lowest death-rates in Croydon, Birkenhead, Halifax, and Norwich, and the highest rates in Salford, Derby, Burnley, Bolton, and Sunderland. The greatest mortality from measles occurred in Derby, Leeds, Sunderland, and Gateshead; from scarlet fever in Wolverhampton and Burnley; from whooping-cough in Norwich and Oldham; from "fever" in Preston and Sunderland; and from diarrhœa in Swansea, Bolton, Burnley, and Huddersfield. The 92 deaths from diphtheria included 54 in London, 8 in West Ham, 6 in Manchester, 5 in Liverpool, 3 in Cardiff, and 3 in Leeds. Three fatal cases of small-pox were registered in Liverpool and 2 in Birmingham, but not one in any other of the thirty-three large towns. There were 63 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Oct. 13th, against 100, 98, and 84 at the end of the preceding three weeks; 8 new cases were admitted during the week, against 23, 14, and 11 in the preceding three weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2171, against 2060, 2084, and 2145 on the preceding three Saturdays; 262 new cases were admitted during the week, against 252 and 258 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 123 to 215 in the preceding six weeks, further rose to 241 last week, but were 25 below the corrected average. The causes of 59, or 1·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Oldham, Leeds, Sunderland, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Salford, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased from 14·9 to 15·9 per 1000 in the preceding three weeks, further rose to 17·6 during the week ending Oct. 13th, and exceeded by 0·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 8·7 in Leith and 12·1 in Dundee to 20·4 in Glasgow and 24·1 in Perth. The 501 deaths in these towns included 22 which were referred to diarrhœa, 10 to scarlet fever, 10 to diphtheria, 8 to "fever," 5 to whooping-cough, 4 to measles, and not one to small-pox. In all, 59 deaths resulted from these principal zymotic diseases, against 56 and 52 in the preceding two weeks. These 59 deaths were equal to an annual rate of 2·1 per 1000, which slightly exceeded the mean rate last week from the same diseases in the thirty-three large English towns. The 22 fatal cases of diarrhœa were within one of the number recorded in the preceding week, and included 10 in Glasgow and 5 in Edinburgh. The deaths from scarlet fever, which had been 7 and 1 in the preceding two weeks, rose again to 10 last week, of which 7 occurred in Glasgow and 3 in Edinburgh. The fatal cases of diphtheria, which had been 16 and 12 in the preceding two weeks, further declined to 10 last week, and included 6 in Glasgow and 2 in Edinburgh. The deaths referred to different forms of "fever," which had been 4 and 5 in the preceding two weeks, further rose to 8 last week, of which 5 occurred in Glasgow. The 4 fatal cases of measles corresponded with the number in the preceding week, and were all recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 68 and 63 in the preceding two weeks, rose again to 94 last week, but were slightly below the number in the corresponding week of last year. The causes of 39, or nearly 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased from 20·4 to 23·6 per 1000 in the preceding three weeks, declined again to 21·5 during the week ending Oct. 13th. During the thirteen weeks of last quarter the death-rate in the city averaged 20·8 per 1000, against 15·9 in London and 14·7 in Edinburgh. The 144 deaths registered in Dublin during the week under notice showed a decline of 14 from the number in the previous week, and included 15 which were referred to the principal zymotic diseases, against 16 and 18 in the preceding two weeks; of these, 7 resulted from "fever" (principally enteric), 3 from diarrhœa, 2 from small-pox, 2 from whooping-cough, 1 from diphtheria, and not one either from measles or scarlet fever. These 15 deaths were equal to an annual rate of 2·2 per 1000, the zymotic death-rate during the same period being 1·7 in London and 2·1 in Edinburgh. The deaths referred to different forms of "fever," which had declined from

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies, 12, Hanover-street, Edinburgh; Hodges, Figgis, and Co., Limited, Grafton-street, Dublin. 1894. Price 9*d*.

[2] On sale (same as first report), price 3d.

7 to 2 in the preceding three weeks, rose again to 7 last week. The 3 fatal cases of diarrhœa showed a considerable decline from those recorded in recent weeks. The deaths from small-pox, which had been 2 and 4 in the preceding two weeks, declined again to 2 last week. The 144 deaths in Dublin last week included 30 of infants under one year of age, and 34 of persons aged upwards of sixty years; the deaths of infants showed an increase upon recent weekly numbers, while those of elderly persons showed a further decline. Four inquest cases and 3 deaths from violence were registered; and 52, or more than a third, of the deaths occurred in public institutions. The causes of 12, or more than 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

THE following officers have embarked in the *Britannia*:—Surgeon-Majors Reynolds and Stuart, and Surgeon-Lieutenant Chambers for India; Surgeon-Captain Black for Gibraltar. The following officers have embarked in the *Jumna*:—Surgeon-Captains Reilly and Pinches, for Egypt; Surgeon-Major Tuckey, for Jamaica; Surgeon-Major Nealon, for Ceylon; Surgeon-Captain Nunnerley, for the Straits Settlements. The following officers have embarked for England on completion of a tour of service in South Africa:—Surgeon-Lieutenant-Colonel Harman, Surgeon-Major Trewman, and Surgeon-Captains Hennessy and Wright. Brigade-Surgeon-Lieutenant-Colonel Williamson is under orders for England on completion of a tour of service in India. The following officers from Aldershot have joined the several districts mentioned against their names:—Surgeon-Lieutenants Buist, Walker, Williams, Swetman, and Thorne, Ireland; Surgeon-Lieutenant Morgan, Dover; Surgeon-Lieutenant Dove, Woolwich; Surgeon-Lieutenant Milner, Alderney; Surgeon-Lieutenant Silver, Devonport; and Surgeon-Lieutenant Evans, Portsmouth. Surgeon-Captain Long has been posted to Chatham, and Surgeon-Lieutenant Fox to Dublin.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel William John Sinclair Campbell retires on retired pay. Surgeon-Lieutenant-Colonel Alexander W. Duke, M.D., to be Brigade-Surgeon-Lieutenant-Colonel, vice J. Macartney, M.D., placed on temporary half-pay. The promotion to the rank of Surgeon-Major of Surgeon-Captain R. C. K. Laffan is antedated to Feb. 4th, 1894.

INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain M. A. Ker (Bengal) are placed at the disposal of the Military Department. The services of Surgeon-Captain C. E. L. Gilbert (Bengal) are placed temporarily at the disposal of the Government of Bengal. Surgeon-Captain E. G. Hare, whose services have been placed at the disposal of the Government of India, Home Department, is confirmed as Civil Surgeon of Khanda. Surgeon-Captain H. W. Pilgrim, Officiating Civil Surgeon of the Twenty-four Parganás, is appointed to act as Medical Inspector of Emigrants (Colonial Emigration), in addition to his own duties. The following postings are notified:—Surgeon-Major F. B. Maclean, to the Southern district; Surgeon-Major R. P. Hetherington, M.B., to the Secunderabad district; Surgeon-Captain H. C. Thurston, to the Belgaum and Bangalore districts.

NAVAL MEDICAL SERVICES.

The undermentioned Staff-Surgeons have been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet:—Edward Wentworth Luther and Everard Home Saunders.

The following appointments have been notified:—Fleet-Surgeon Bernard Renshaw, to the *St. George*. Staff-Surgeons: William Thompson, to the *Vernon*, and Francis A. Jeans, to the *Cambrian*. Surgeons: Thomas E. Honey, to the *Hebe*; Lancelot Kilroy, to the *Jason*; George F. Collins, to the *Pembroke*; Joseph A. Moon, to the *Cambrian*; and Johnston H. Acheson and Charles J. Fyfe to the *St. George*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Edmond James Lawless, 4th Volunteer Battalion, the East Surrey Regiment, to be Surgeon-Major.

VOLUNTEER CORPS.

Artillery: 2nd Northumberland (Percy) (Western Division, Royal Artillery): Surgeon-Lieutenant A. S. Purves resigns his commission.—*Rifle:* 1st Volunteer Battalion, the Prince of Wales's (North Staffordshire Regiment): Surgeon-Lieutenant John Russell, M.B., is appointed Captain. 2nd (Renfrewshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Captain M. H. Taylor to be Surgeon-Major.

VILLAGE SANITATION IN INDIA.

The Government of India, having recently had this subject under consideration in connexion with the representations of Miss Florence Nightingale and the International Congress of Hygiene which was held in London, have replied that village sanitation in India is a matter which requires to be handled with very great caution, and that the habits and prejudices of the people must be most carefully considered. The provision of a good water-supply is the first essential improvement, and it is the only one which meets with general appreciation from the people. The drainage of water-logged tracts is being arranged, as far as possible, under the skilled supervision of provincial sanitary boards. The development of local sanitation in India must proceed upon existing lines. It would create great and general dissatisfaction if all improvements in local communications, roads, and postal and medical facilities were to be postponed in order to meet the primary expenses of local sanitation. The Government of India adds that the conditions of villages are probably better now than has been the case for centuries.

JUNGLES AND THE DEATH-RATE IN INDIA.

The *Times of India* has an article on this subject, from which it appears that, despite the system of rewards for the destruction of wild beasts inimical to human life, the total mortality from this source continues to increase, the figures in the record for last year being considerably above those for the previous year. The deaths from snake-bite, which heads the list, are over 21,000, and those from tigers are nearly 1000. In connexion with this subject we may here allude to the plucky conduct of a member of the Indian Medical Service. An officer's servant at Dera Ismail Khan was recently bitten in the foot by a snake. Surgeon-Lieutenant Evans, I.M.S., hearing of the accident, applied a tourniquet and gallantly sucked the wounds made by the reptile. This prompt treatment proved successful, notwithstanding that acute symptoms are stated to have already set in when it was applied.

SCARLET FEVER IN TIPPERARY.

Scarlet fever is stated to be prevalent among the troops now quartered in the Tipperary barracks in Ireland. Several men of the Seaforth Highlanders have been attacked, and the disease is said to be prevalent also in the district.

The long-service and good-conduct medal in the army has been awarded by the Duke of Cambridge to 163 recipients, nineteen of whom belong to the Army Service, Medical Staff, and other departmental or colonial corps.

The services of Surgeon-Captain H. E. H. Smith, Army Medical Staff, have been placed at the disposal of the Khedive for employment in the Egyptian Army.

Correspondence.

"Audi alteram partem."

"THE USE OF CINNAMON IN THE TREATMENT OF CANCER."

To the Editors of THE LANCET.

SIRS,—By some accident I did not see THE LANCET of Sept. 15th until some time had elapsed after its publication, or otherwise I would have asked you sooner to allow me to offer a few remarks on a report of five cases of cancer, under the care of Mr. Hulke, treated with cinnamon at Middlesex Hospital. Such an adverse report from any hospital, or from any practitioner, would have silenced me altogether had I at any time pretended, or stated, that cinnamon should be regarded as a specific in cancer. But in my letter to THE LANCET of July 21st last I was most careful to guard myself from saying any such thing. It is not only difficult but most invidious to attempt to parry an adverse criticism on a suggested line of treatment by saying that the cases

selected by one's critic were not suitable—any such excuse on my part would lay me open to the charge of wishing to hedge and to shift from my original position. Such a course is as far from my wish as from my intention, and in the present instance also it would be superfluous, for the results published by the Middlesex Hospital, as far as they go, merely confirm and give emphasis to my own experience obtained at the Manchester Cancer Hospital and elsewhere, that in such cases of cancer as those described in the Middlesex Hospital report, where the disease has not only caused widespread damage at its original site, but has spread to surrounding organs, or by mechanical pressure is causing obstruction of the primæ viæ or of the bloodvessels, or to the action of the nerves, it is hopeless to expect improvement from the use of any drug as yet known. It was this experience of mine which led me in my letter of July 21st to say that "there are distinct limits within which only beneficial results may be expected, and outside these limits it is probably hopeless to attempt to improve the patient's condition." Far, then, from being disappointed at the negative results reported from Middlesex Hospital, I must own that I should have been agreeably surprised to learn that cinnamon in such cases as those described by your correspondent had succeeded in relieving the patients. It being, however, admitted on every side that as yet we know of no treatment for cancer, would it not be as reasonable, I will not say more reasonable, instead of confining experiments undertaken to test the value of a suggested line of treatment only to cases where it must obviously be hopeless to expect improvement—unless, indeed, the drug experimented with is an absolute specific: a virtue that has never, as far as I am aware, been claimed for cinnamon—to include in the experiments some cases, at any rate, where the disease has not made such ravages as in those cases described in THE LANCET of Sept. 15th—in cancer of the uterus, for instance, where, though the organ may be fixed, the disease has not spread to the surrounding organs, and where blood and albumen are not found in the urine, but where pain has become so severe as to necessitate the exhibition of morphia; or cancer of the tongue or pharynx, where pain is present, but where the disease has not worked such destruction that "large glandular masses extend collar-like round the neck"; or early cancer of the rectum, where the area of dulness caused by the tumour cannot be percussed out above the pubes? Should experiments in such cases as I have indicated unvariably yield negative results, then there will be no other course open to me but to apologise for troubling you, and frankly to own that I, and those friends who have so kindly experimented with cinnamon at my suggestion, have been deceived and led astray by a remarkable series of singular coincidences. As to the statement that the cinnamon made the patients sick I cannot answer that. I remember that some—I think most—of the patients at the Cancer Hospital were sick after taking cinnamon; but, if I also remember rightly, the poor creatures were frequently sick after taking anything, whether in the shape of food or drugs. But, except in these very advanced cases, I have never noticed that result; two of my patients disliked the cinnamon very much, but it did not make them sick. One patient, placed under my care by Dr. Milligan of the Manchester Hospital for Diseases of the Throat, took cinnamon daily for fourteen months; it never made him sick or caused him any discomfort. Another patient has taken it since September, 1893, and is still continuing to take it by the advice of her medical attendant, and she assures me that she has never experienced any difficulty in taking it, nor has it ever made her sick. A third patient, who has taken cinnamon since January, 1894, and whose medical attendant still urges her to continue to take it, tells me that cinnamon has never made her sick or caused her any discomfort, except upon one occasion last June, when the decoction, for some reason or other, became sour and its surface covered with mould. A fourth patient, placed under my care by Mr. Stanmore Bishop, took cinnamon during the whole of 1893, and it never made him sick. A patient at present in Ancoats Hospital is taking half a pint of cinnamon daily, and it does not make him sick. I should like to say in this connexion, however, that the decoction of cinnamon that this patient is now using has been prepared from my prescription by Messrs. Woolley & Sons of Manchester, and is a very great deal stronger than that which the patient used to take before entering the hospital, which I had caused to be made at my own house, and which was doubtless very roughly and indifferently prepared by one of my servants in an ordinary large saucepan. So much stronger, indeed, is this decoction of Messrs Woolley & Sons than that I made myself that I should think that six ounces of the former are more than equal in strength to half a pint of the latter.

I am, Sirs, yours truly,

Withington, Manchester, Sept. 29th, 1894. J. CARNE ROSS.

DIPHTHERIA AND PSEUDO-DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—May I draw attention to the report from the Bacteriological Laboratory of the Health Department of New York by Dr. W. H. Park and Mr. A. L. Beebe, addressed to Dr. Hermann M. Biggs, Pathologist and Director of the Bacteriological Laboratory, and published in the New York *Medical Record* of Sept. 29th. It is, I think, of great interest and importance, and cannot be too carefully read by practitioners of medicine. There are one or two points especially in the report which I consider of great practical moment as regards the notification and hospital treatment of diphtheria. I believe that, in the absence of some definite cause, such as scarlet fever, measles, or an injury, the general practice is to notify all cases of membranous croup as diphtheria. Dr. E. W. Goodall, at the Hunterian Society on April 25th, practically supported that view: "If there were any local spread [of membrane in the throat] the disease was almost certainly diphtheria, and if it involved the larynx, then it was certainly diphtheria.[1] Now, turning to the report to Dr. Biggs, which deals with the bacteriological examination of 5611 cases of suspected diphtheria, I find that in 286 of the cases examined the disease was entirely or chiefly confined to the larynx or bronchi (283 children and 3 adults). In the cultures of 229 out of the 286, characteristic Löffler bacilli were found and the cases were thus proved to be true diphtheria. In 57 no diphtheria bacilli were found, but in 17 of these the cultures were unsatisfactory. So that, excluding the 17 doubtful cases, there were 40 cases of pseudo-diphtheria in which the diphtheria bacilli were certainly absent. The disease was confined to the larynx or bronchi in 27 of the 40, while more or less exudate or membrane was present in the tonsils or in the pharynx in 13. Under our present system, if they occurred in London, these 40 cases might find their way into a diphtheria ward with a chance of offering a culture to the virulent diphtheria bacilli. With the recent additions to our knowledge of the pathology of diphtheria is it not only just that notification, or, at all events, removal to a fever hospital, should be preceded by a bacteriological report of each case? It seems to me most important that cases of pseudo-diphtheria, with a mortality of 0 to 20 per cent., should not be mixed with cases of true diphtheria where the mortality varies from 25 to 70 per cent. (New York report). The question of course arises about placing together those cases in which virulent Löffler bacilli are found and those which show non-virulent Löffler bacilli only; but I believe this is still a much debated point, so I will not dwell upon it here. An obvious reflection arises from a consideration of the above. To any one who is inclined to be sanguine over the successful result of his treatment of one or two cases of diphtheria by antitoxin (and, *soit dit en passant*, I do not see anything very striking in the clinical course of the cases recently reported in our medical journals), it is advisable that a careful study of this report should be made. With the division of the bacilli of so-called diphtheria into such groups as virulent Löffler bacillus, the non-virulent Löffler bacillus, and the short, plump, false Löffler bacillus, it seems to me very important before judging of the efficacy of any mode of treatment to determine accurately the nature of the bacillus with which we are dealing.

I am, Sirs, yours truly,

Brondesbury, Oct. 16th, 1894. H. J. MACEVOY, M.D., B.Sc.

"A DANGER OF THE ELASTIC TOURNIQUET."

To the Editors of THE LANCET.

SIRS,—I have only just seen Dr. Bell's letter on the above-named subject in your issue of Oct. 6th, and that drew my attention to a letter in THE LANCET of Aug. 4th of this year, published when I was away on my holiday. In the letter published on the latter date a "Medical Officer" asks

[1] THE LANCET, May 5th, 1894.

for any information on the subject of paralysis caused by the use of the elastic tourniquet. If he will refer to the *British Medical Journal* of Aug. 10th, 1889, and note especially the first column of page 310, he will find some details which may give him good hope, if he already needs it, and will encourage him to be patient.—I am, Sirs, yours faithfully,

Rodney-street, Liverpool, Oct. 9th, 1894. CHAUNCY PUZEY.

"THE TEACHING OF CHILDREN'S DISEASES AT GENERAL HOSPITALS."

To the Editors of THE LANCET.

SIRS,—I have read with much interest the letter of Dr. Coutts under the above title in THE LANCET of the 13th inst. I am in entire agreement with him when he says that "a competent knowledge of children's diseases should be the property of every student," but I am not at all sure that this knowledge will be best acquired by the student at the out-patient department or in the wards of a general hospital. The student of to-day has assuredly enough to do at whatever general hospital he attends, when he divides his attention between the physician, the surgeon, the obstetric or gynæcological physician, with, it may be, the ophthalmic surgeon as well, without the addition of a physician for children's diseases; and to add the latter to his general hospital work would be, I think, to encumber him, with the result that all departments would suffer. Dr. Coutts proposes to remedy "the inadequate methods in vogue" by appointing to each general hospital a gentleman to treat and teach the diseases of children. In my judgment a better remedy would be for our provincial college authorities to appoint a university lecturer on diseases of children, such as exists in Edinburgh and Manchester, who would supply the theoretical part of the subject, the practical side being best acquired at a well-equipped children's hospital. If our college authorities were made acquainted with the fact that at least *every other patient* the young medical man will be called upon to treat will be a child or an infant, I feel sure the suggestion I have made would commend itself to them and receive suitable attention. In conclusion I desire to offer to Dr. Coutts my thanks for ventilating this subject, which I look upon as one of great importance. I am, Sirs, yours truly,

Shaftesbury-square, Belfast. JOHN MCCAW.

"REMUNERATION OF MEDICAL WITNESSES."

To the Editors of THE LANCET.

SIRS,—It is gratifying to see the remarks in THE LANCET of Oct. 13th on the remuneration of medical witnesses. As a police surgeon I may be excused, perhaps, for testifying somewhat to the inadequate pay for giving evidence. In the police-court I have been kept several hours, and the fee is 10*s.* 6*d.* Again, at the assizes, either Manchester, Liverpool, or Lancaster, the amount paid is first-class railway fare and one guinea a day. With that you have to find yourself luncheon and dinner. I have had to leave my house at 8 A.M. and been unable to return until 11 P.M., owing partly to the cases being taken late, before the court rises, and the trains not fitting in for the return home. It entails keeping an assistant, for no man can possibly leave his practice for so long a time without leaving a deputy. For all the time taken up a guinea is tendered to him. I have before now had two cases heard the same day, and the fee is the same. I think that some extra pay should be given in such cases. I trust that the Home Secretary will see his way to pay medical men a just fee for the time and labour that the medical witness has to give on behalf of the Treasury.

I remain, Sirs, yours faithfully,

Blackpool, Oct. 16th, 1894. FREDERICK A. HESLOP.

THE PATHOLOGY OF THE FARÖE ISLANDS.

To the Editors of THE LANCET.

SIRS,—In 1892 you were kind enough to publish some notes of mine on the pathology of Iceland, from which country I had just returned. Having spent this summer in the Faröe Islands, it may interest some of your readers to learn what my experience was of the pathology of these very little known islands. It may be useful, also, in view of the possibility of these islands being more frequently visited by tourists in the future, for the public and profession to know how exceptionally healthy they are. I am publishing a small work descriptive of my experience there this summer, and, though the necessity of somewhat roughing it would prevent medical men from recommending them to very delicate people, yet to those whose disorders were due to overwork or mental strain the grandeur of the scenery, the superb sea air, giving as it does in this respect all the advantages that would be gained by a long sea voyage, and, above all, the quiet, never troubled by any storm except one caused by the elements alone, might render a stay of a few weeks there a very useful restorative. The mean annual temperature is 45° F., that of the summer is 54°, and that of July 57·1°. The temperature is thus mild and equable, and though the climate is somewhat humid, my own experience from two visits is that a visitor is as likely, or even more so, to enjoy fair weather there during July and August as in the same period in Scotland. It may be as well to observe that although the air may be moist it is the reverse of a rheumatic place, rheumatism and rheumatic fever being somewhat rare, and the latter when it occurs is seldom of a serious nature. It may be remembered as regards this malady that I made the same remarks on Iceland, which, however, being in a considerably higher latitude, though much colder has a much drier air.

One of the terrors which all nervous people may experience in taking a pleasure trip in almost any part of the Continent—that of getting typhoid fever—may be absolutely discarded as regards these islands, as here for a great many years it has been quite stamped out. This is, perhaps, rather a curious fact when one sees how very careless they are in many of the villages as to the source of their water-supply and their negligence with regard to the disposal of their refuse. No case of small-pox has occurred since the year 1856, but I must mention that vaccination is very rigorously carried out. Scarlet fever, though not unknown, is very rare and of a mild type. Syphilis is quite unknown, though gonorrhœa, unfortunately, seems to be gaining ground in the southern islands, but is quite unknown in the northern group. Though the latest scourge of civilisation, influenza, seems always to reach there—as it does, in fact, every region where man has penetrated (I was told by the whalers that even Greenland has not escaped)—it does not appear to be of so severe a type as elsewhere, and is not even mentioned there as a source of increased mortality. Amongst the natives the great sources of death are pneumonia, pleurisy, and bronchitis; and this is little surprising, considering the exposure to the weather which the calling of these islanders necessitates, and the difficulty in their small and not very commodious dwellings of properly drying their clothes. Diphtheria is very rare. No cases of leprosy have been seen since the middle of the eighteenth century. This struck me as very curious, as the diet of the natives is precisely the same as that of the Icelanders, who are great sufferers from this curse. It is also curious to note that hydatids, so prevalent in Iceland, are quite unknown in spite of the large number of sheep and dogs. Although of late years cases of tuberculosis are constantly cropping up, the doctor there feels sure that he has traced them to the importation of English and Scotch beef, yet it has seldom been known to attack the lungs, and phthisis is nearly unknown. Strumous affections are not uncommon, as would be expected when in-and-in breeding often occurs. Conjunctivitis, keratitis, and cataract in old age are very common. This is due, no doubt, to the exposure to the elements. There can be no doubt that these islands on the whole enjoy a high state of salubrity. They are, moreover, most amply provided with skilled medical attendants. Dr. Borg of Thorshaven, who resides there during the entire year, is a gentleman of unusual proficiency in every branch of his profession. His dexterity as an operating surgeon I had an opportunity of witnessing, and what he did I have never seen better done by anyone. He is thoroughly up to date in the matter of antiseptics. The hospital of Thorshaven is the only one on the islands, and though it only contains sixteen beds the doctor assures me it is sufficient for his requirements. It is prettily situated on the edge of the fiord, built of wood, and contains four wards, each holding four beds, apportioned equally between medical and surgical cases and men and women. He has a nice little operating theatre and dispensary, and a thorough equipment of surgical instruments of the best and latest description (many I observed were of London manufacture) supplied by the Danish Government, who also

supplement his income by an annual grant. There are also several other medical men on the islands who are also paid by the Government, whose assistance can always be obtained by Dr. Borg in cases of serious or major operations, he being in chief medical charge of the whole islands.

I am, Sirs, yours truly,

JOSEPH RUSSELL-JEAFFRESON.

St. Bartholomew's Hospital, Oct. 7th, 1894.

SCHOOL ATTENDANCE AND DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—The age at which it is compulsory that a child be sent to school is five years. Between three and five children are sent to school or kept at home at the discretion or option of the parents. At seven years of age a child is transferred from the infant school to a boys' or girls' school. The Act abolishing the school pence and making education free came into force late in 1891, yet the only extraordinary rise in the numbers representing "average attendance" from 1871 to 1892 took place between 1889 and 1890, when the increase was three times as great as that between 1891 and 1892. In my letter which appeared in THE LANCET of July 23th last, on "The Increased Mortality from Diphtheria," I pointed out that in London more than three times as many deaths from that disease occurred under five years of age as between five and ten, according to the Registrar-General's annual report for 1892. A subsequent investigation which I have carried out shows that the incidence of mortality from diphtheria has been increasing upon the earlier group (0–5) from 1876 onwards, the mean coefficients (by which to multiply the death-rates at all ages so as to arrive at those of the group in question) having been successively 4·618 (for 1876–80), 5·102 (for 1881–85), 5·355 (for 1886–90), 5·723 (for 1891–93). Strange to say, for the age-group (5–20) which includes the majority engaged in school and college attendance there has been a decline in the comparative incidence of mortality from diphtheria, the corresponding means having been 1·082, 0·979, 0·992, 0·957, and the decline has been most marked since school attendance became free at the primary schools. Such being the facts, it surely becomes a question whether the closing of schools, other than those devoted to infants, is demanded on account of diphtheria. I contend that the children for the most part incur greater risks at home or in the streets than they do at school, and that if proper care were taken their attendance at school might be made available for discovering houses that had infectious cases in them, whether diphtheritic or otherwise. Of course, children from such houses should not be admitted to mix with others except those in like condition, but it would be well not to send them home unless they were actually suffering from disease at the time. The medical officer of health, or some deputy of his, should carefully inspect the children daily. But to close a school is bad for the children, bad for the parents, bad for the managers, and bad for the ratepayers or supporters. Besides, the community at large incurs a greater risk of being infected.

I am, Sirs, yours faithfully,

Kingston-on-Thames, Oct. 15th, 1894. D. BIDDLE.

MEDICAL DEGREES FOR WOMEN IN EDINBURGH.

To the Editors of THE LANCET.

SIRS,—Your readers may remember that in March, 1893, it was hoped that the problem of obtaining medical degrees for Edinburgh women had been solved by the recognition of the lecturers of the Edinburgh School of Medicine for Women by the University of St. Andrews as "specially appointed lecturers" to instruct women with a view to the St. Andrews medical degrees. Various difficulties and delays, however, have intervened, and the fruition of the hopes then entertained seems forbidden by a recent ordinance of the University (Scotland) Commission, which provides that "the classes of University lecturers must be conducted *at the seat of the University*," so that the recognition of Edinburgh or London lecturers in that capacity seems impossible. Under these circumstances I made an urgent application to the University Court of Edinburgh to do what the University of St. Andrews was willing, but apparently unable, to do—viz., to recognise the instruction given in our school as equivalent to that which was required for the degrees of M.B., C.M., in the University. I have to-day received an official reply granting this request, so that henceforth our students, on payment of the ordinary matriculation fee and compliance with the usual regulations, will practically become students of the University, and will be able to go up for the University medical examinations and to take their degrees in due course. Nothing can be conceived more satisfactory as a conclusion to the struggle for the medical education of women in Edinburgh, which has now extended over exactly a quarter of a century, and which has ended in concessions which, while avoiding the difficulties connected with intra-mural instruction, give to women the opportunity of a complete medical education in Edinburgh, and of access to the examinations and degrees of the Edinburgh University.

I shall be glad to furnish particulars of fees, scholarships, &c., to those women who may be personally interested in the matter. I remain, Sirs, yours faithfully,

SOPHIA JEX-BLAKE, M.D.,

Dean of the Edinburgh School of Medicine for Women.

Surgeon-square, Edinburgh, Oct. 9th, 1894.

"THE CHELSEA HOSPITAL FOR WOMEN."

To the Editors of THE LANCET.

SIRS,—The many letters you have published from the late members of the medical staff and your own articles seem at last to have resolved themselves into one charge—viz., that the new appointments to the medical staff were made in indecent haste and with partiality, and that the remaining members of the medical staff were not consulted. There is no vagueness about this charge, therefore it is capable of deliberate refutation.

In THE LANCET of Oct. 13th you state that "Dr. Travers, at the recent meeting of governors, said he had letters from Mr. Hutchinson Sir Spencer Wells, and Dr. Robert Barnes stating that they had nothing whatever to do with the election of physicians to the hospital, and disapproving of the manner in which the elections had been made." The facts are in exact opposition to Dr. Travers' statement; and, knowing the error he had no doubt unintentionally fallen into, I at once drew his attention to it. I think, had I not done so, I should have been wanting in my duty as chairman of the meeting. But in your report of the proceedings of this meeting you make no mention of my having done so, or of the fact that the governors present were shown the attendance book with the signatures of Sir Spencer Wells and Dr. Robert Barnes as attending the Special Selection Committee.

This committee was appointed for the sole purpose of considering the applications for the new medical staff. Sir Spencer Wells and Dr. Robert Barnes attended and positively helped, with the three laymen who formed the Special Committee, to select and approve the twelve names that were sent up to the Board for election, with the report that whoever were elected from the twelve names for the six appointments would be thoroughly accepted. The whole of the thirty-four applications were duly considered, and nearly all the candidates were interviewed by this committee. Mr. Hutchinson, I understood at the time, was unable to be present, as he had been called out of town, and the notice of the meeting was too short for him. Dr. Robert Barnes, as a member of the Board of Management, might have remained for the election, but he retired with Sir Spencer Wells, saying as he did so, "As my brother consultant, Sir Spencer Wells, has retired, I think I should do so, and leave the election to the other members of the Board of Management." Sir Spencer Wells was not a member of the Board.

To show how willing the Board were to have the help of the consultants I may mention that, so far back as July 27th last, I received a letter from Dr. Robert Barnes suggesting that the consulting staff should help in the reconstruction of the medical staff, and I accepted his kind offer the same day. The following is a copy of my letter:—

[COPY.]

27th July, 1894.

DEAR DR. ROBT. BARNES,—Your kind note of the 26th inst. has been sent to me here, my country residence. I feel quite sure the Board of Management will gladly receive any suggestions the consulting staff desire to make, and I agree with you that if you cannot meet at this season of the year to discuss the present situation it would be better to do so by letter, and afterwards to communicate your views to the Board of Management for their consideration. Perhaps you will kindly initiate this.

We had a meeting of the Board of Management after the special general, and we decided for it to meet weekly on Wednesdays at 3 P.M. for the present, or until such time as we get into smoother water.

Would you kindly try and be at the meeting next Wednesday? At the last meeting it was decided to advertise the vacancies in the medical staff in the usual manner, and this is now being done.

"The Press" is very busy with us just now. Can nothing be done on our behalf through the medical journals?

I will put your letter before the Board of Management on Wednesday next.—With best compliments I remain, dear Dr. Barnes, yours very truly, (Signed) THOS. W. BROOKES.

To Dr. Robert Barnes.

As I had promised, I placed Dr. Barnes's letter before the Board of Management on Aug. 1st, and the Board requested me to again write to him and to inform him that it gladly accepted his offer and requested him to be good enough to communicate with the other members of the consulting staff if he had not already done so. The following is a copy of the letter I wrote to Dr. Barnes, dated Aug. 2nd. :—

[COPY.]

DEAR DR. ROBT. BARNES,—As promised in my note of the 27th July, I yesterday placed your letter to me of the 26th July before the Board of Management of the Chelsea Hospital for Women, Sir Algernon Borthwick, Bart., M.P., in the chair. I am instructed by the Board to say they gladly accept your kind offer, as one of the consulting staff, to assist them in the reconstitution of the medical staff. Will you, therefore, be good enough to communicate with the other members of the consulting staff, if you have not already done so, in order that their views may also be made available. I am also authorised to ask you, and through you the other members of the consulting staff, to kindly attend the meeting of the Board of Management next Wednesday at 3 P.M., when the applications to fill the vacancies in the medical staff will be taken into consideration. The lay members feel they have some claim upon the consulting staff of the hospital in this matter, and I trust you will be able to accede to their request, as also your colleagues, and give them the benefit of your valuable experience so necessary at this crisis.

I remain, dear Dr. Barnes, yours very truly,
(Signed) THOS. W. BROOKES.

In reference to the appointments being made in undue haste, the disorganised state of the medical staff after their resignations rendered it absolutely necessary, in the interest of the hospital, to proceed without delay to the reconstitution of the new staff. A meeting of governors was therefore held, with Lord Cadogan in the chair, and a special resolution was passed authorising and instructing the Board to immediately proceed with the election of the new medical staff. In conclusion, I may add that the members of the late medical staff do not seem to understand the difficult position in which the Board of Management found themselves in view of the report of the Committee of Inquiry and the attendant risk of importation of infection into the hospital, which was, after all, the primary cause of the trouble that the hospital, no less than the late members of the staff, has suffered; and that it has been a most painful duty for the Board to have had to perform towards men with whom they had been so long and pleasantly associated, and with whom friendship and warm regard had in several cases sprung up. They sympathise most deeply with the late medical staff, and view their position with extreme regret, knowing that no imputation of dishonourable conduct can be charged against any of those gentlemen.—I remain, Sirs, your obedient servant,

Oct. 16th, 1894. THOS. W. BROOKES.

*** Our correspondent has deliberately failed to refute a charge which we have never exactly made. We have written nothing with regard to this unhappy institution that we do not know to be correct. We propose to recapitulate our position and summarise our criticisms for his consideration. On Feb. 10th, 1894, we commented upon Dr. Louis Parkes' report to his vestry upon the Chelsea Hospital for Women, and considered that it seriously reflected upon those responsible for the *medical* management of the institution. On July 21st we published the report of the Committee of Investigation appointed by the hospital authorities to inquire into Dr. Parkes' statements. This committee did not, among other things, consider that the *lay* management of the hospital was satisfactory. As a result of this report the whole of the medical staff of the hospital resigned; and in a leading article published the following week—July 28th—we considered that those responsible for the lay management, being held partly to blame for the state of things, should have taken the same step. On Aug. 24th we commented adversely on the fact that the new staff had been elected by the old lay managers, who had themselves been unfavourably reported upon by the independent Committee of Inquiry. This is our position now. Mr. Brookes's own letter, communications in our possession, and the subsequent attitude of the consulting staff, sufficiently prove to us that the new elections have been made under circumstances that did not meet with the approval of those three gentlemen.—ED. L.

"CERTIFYING UNDER THE LUNACY ACTS."

To the Editors of THE LANCET.

SIRS,—With regard to the criminal responsibility of the insane one cannot but agree with your endorsement of the views held by the writer in the *Times*. The comparative neglect of the teaching of mental diseases, and the crudity of the knowledge of insanity possessed by the majority of general practitioners, to whom the lot of certifying lunatics mostly falls, undoubtedly make a more searching examination of an individual's mental condition necessary when cases of criminal responsibility are involved, and as these examinations are generally performed by experts the interests of the alleged lunatic, as well as those of the public, are sufficiently safeguarded. The chief point in "Lex's" communication in your last issue seems to be that, although two medical men may be unable, in the face of expert evidence, to establish a plea of irresponsibility on the ground of insanity, yet by their certificates they may confine an individual for a lifetime in a lunatic asylum. Surely "Lex" must either be ignorant or unmindful of the provisions of the Acts which he writes about. The signing of two medical certificates is a legal formality which must be complied with, and if it were the only one he would have just cause for agitation, but, although the certificates of two medical men, accompanied by a petition and a magistrate's order, may serve to obtain admission into a lunatic asylum, it by no means follows that they are able to imprison for life a person about whose insanity a doubt exists.

Immediately a person becomes an inmate of an asylum (I am referring to private patients) he has the right to interview a magistrate within certain time limitations; it is customary for the magistrate to be accompanied by his clerk—thus the patient's mental condition is viewed from a legal point of view. The Lunacy Commissioners whom "Lex" seems to leave out of the question do not look upon the medical certificates as affording an infallible indication of the patient's mental condition, but they demand from the medical officer of the asylum, who may be looked upon as an expert, a statement of the mental and bodily condition of the patient, and this has to be lodged with them not before two clear days and before the expiration of seven clear days after admission; they, moreover, demand another similar statement at the end of a month. Unless the honesty or capability of the medical officer is impugned the regulations of the Commissioners assure a correct statement of a person's sanity or insanity being laid before them, upon which they can act. In addition, there are the periodical visits of a medical and legal Commissioner who interview all patients, and the right of patients to have letters forwarded to, amongst others, the Lord Chancellor and the Commissioners in Lunacy, and which letters are regarded as indicating to some extent the mental condition of the writer. From the foregoing facts "Lex" must see that the certificates of medical practitioners are subjected to revision, although not before removal, by medical and legal experts acting on behalf of a properly constituted legal authority. That the revision takes place after removal is a small matter taking into consideration the extremely few instances in which it would prevent an individual from being sent to an asylum and also the further delay which would be brought about, a delay which is already sufficiently great in some cases to militate against chances of the recovery and safety of the individual concerned. Although reform of the Lunacy Acts is needed in many ways I do not see how "Lex's" suggestion would benefit anyone; on the other hand, it would fritter away time which might be more profitably spent in reforming them in other directions.

I remain, Sirs, yours faithfully,

Oct. 15th, 1894. Z.

*** We have received from Dr. Arthur Foxwell a note pointing out a misprint in his letter which we published last week. He wrote, of course: "The pulmonary systolic murmur, like the second sound, and no doubt for similar reasons, is *feebly* conducted in all directions, except those mentioned under (1)." The sentence appears: "is *freely* conducted," which quite changes its meaning.—ED. L.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Owens College.

THE winter session was opened on the 2nd inst., when Dr. Ward, the principal, made his annual statement and delivered an address to the students. The number of students in the arts, science, and law departments, including 61 women students attending classes in the college, is 583; in the department for women, 108; in the medical department, 405; total, 1101—or, allowing for double entries, 965. There are also 362 evening students, and 16 attending the Saturday class in biology for science teachers. In addition to these, the short evening courses open to the general public are largely attended. The new buildings of the medical school will be opened on Nov. 6th by the Duke of Devonshire, president of the college. The report of the council states that "at present the subscriptions to the new medical buildings still fall short of the desired total by at least £25,000." The governors afterwards received the report of a committee appointed in March last to consider the financial position, from which it appears that there will be a deficit of £5000. Special efforts are being made to remedy this state of things, and it is hoped that there may be an increased Government grant, which is at present only £1800 a year. It appears that, "while £15,000 per annum is the whole of the sum granted by Parliament in support of the higher education furnished by ten colleges in England and one in Scotland, an annual grant of £13,500 is divided between three colleges in Wales."

Lancashire and Cheshire Branch of the British Medical Association.

An adjourned meeting was held in the memorial hall on the 10th inst., Dr. Rayner, the president, being in the chair. There was a very large attendance. The vexed question of the licensing of midwives was evidently the attraction. This was introduced by Dr. Woodcock, who proposed the following resolution: "That the position on the Lancashire and Cheshire Branch Council of gentlemen who continue to train and grant 'diplomas' or 'certificates' to pupil midwives—a practice condemned by the General Medical Council and this branch—is anomalous." His speech, which was moderate in tone and very well delivered, appeared to commend itself to a large portion of his audience. Dr. J. B. Brierley seconded the resolution. Dr. Sinclair opposed it. The discussion was continued by Dr. Walter, Dr. W. Wingate-Saul, Dr. Thornley and others, and at the close of a long and at times acrimonious debate a vote was taken, with the result that Dr. Woodcock's resolution was carried. Its opponents did not wait for the show of hands, the bulk of them retired without voting. It is very evident that a large majority of those engaged in general practice are strongly opposed to what they consider would be the creation of an inferior and imperfectly educated order of practitioners.

Opening of the Thirlmere Waterworks.

On Friday last the waterworks were formally opened at Thirlmere by Sir John Harwood, chairman of the waterworks committee, in the presence of the Lord Mayor of Manchester, the Bishop of Carlisle, Sir J. T. Hibbert, M.P., &c., and most of the members of the corporation. On Saturday the fulfilment of the scheme was celebrated in Manchester "with quiet but impressive ceremony." An immense crowd of between 20,000 and 30,000 people assembled in Albert-square to witness the water from Thirlmere set free to play from a temporary fountain on the simple turning of a key by Sir John Harwood. It was an impressive and gratifying sight to see the interest shown by this orderly but enthusiastic crowd in the completion of this work—so all-important for Manchester. It was felt to be fitting and right that the chief actor in each day's ceremony should be Sir John Harwood. As chairman of the committee, by his ability, energy, indomitable and untiring perseverance, he has done more than any other man to bring this great undertaking to a successful issue, and deserves all the distinction the proceedings could confer. A beautifully illuminated address, presented to him by the corporation, concludes as follows:—"For your wise and firm administration of the works, for the time devoted without stint, for your efforts on behalf of the workmen employed and the education of their children, the sincere gratitude of the ratepayers of Manchester is due. Your work—long, laborious, and anxious—has been sustained with dignity and patience; its conclusion must afford you great satisfaction; and we tender you our best thanks, coupled with the expression of our earnest wishes that you may witness during many years the continued and increasing prosperity of this great enterprise."

A Few More Facts concerning Thirlmere.

The scheme for obtaining water from the Lake district was initiated about twenty years ago. In 1875 Mr. Bateman, the engineer to the corporation at that time, wrote to Sir Joseph Heron, the late town clerk, stating that there would not be water enough to last during the summer of 1882 "unless that year was preceded by an unusually wet season." He pointed out in a report he had been asked to make as to obtaining a supply from the lakes that, apart from Ullswater and Haweswater, Thirlmere was the only lake from which water could be obtained by gravitation. There was great opposition both in Parliament and out of it, and Manchester had to bear the reproach of barbarous Vandalism. The works were not begun till 1886, when Sir John Harwood became chairman of the committee and Mr. G. H. Hill the engineer. When the complete scheme is carried out 50,000,000 gallons a day can be supplied to Manchester for 150 days even if no rain falls in that period. This is an unlikely contingency. The gathering ground of 11,000 acres, including the "brow of the mighty Helvellyn," has an annual rainfall of about 100 in.—sufficient to send down a daily contribution of 55,000,000 gallons. When the lake is raised to the full height of fifty feet there will be storage for 8,130,686,193 gallons. The gathering ground is under the sole control of the corporation, whose interest it will be to keep it free from pollution for all time. The full supply of 50,000,000 gallons daily will cost about £4,500 000. At present the daily supply from Thirlmere is 10,000,000 gallons, and the cost, including Parliamentary and all other expenses, has been about £2,500,000. As the need for more water arises it will be met by laying down another line of pipes. When the full supply is required there will be five lines of pipes, for the laying of which provision has been made. As each additional line of pipes will entail a cost of £500,000, it is, of course, advisable to spread the outlay over a lengthened period. The embankment at the north end of the lake is fifty feet high, and when the water has been raised to this level the area will have been increased from 328¼ acres to 793 acres. At present the lake has been raised twenty feet, and the large overflow falls into St. John's Beck. The straining-well at the south end of the lake is ninety-six miles from Manchester, and is itself a marvellous piece of engineering. Much more might be written did space allow as to the details of this great work, of the difficulties of construction, and the methods by which Mr. Hill has been able to overcome them. The readers of THE LANCET need not be told of the importance of a good supply of pure water to a community so vast as that of Manchester and the district; and in his speech on Saturday Sir John Harwood said he remembered Dr. Tatham, when medical officer of health, saying to him: "If you will give us an unlimited supply of good and pure water, I will be responsible for the health of the city."

Oct. 16th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Coroner and his Critics.

THE City Coroner, Mr. Oliver Pemberton, F.R.C.S., has raised a hornet's nest about himself. The procedure was a simple one, the effect turbulent. It seems that on the 2nd inst. Mr. Alderman Barrow died, in his sixty-seventh year, somewhat suddenly from failure of the heart. The coroner, at the opening of his court on the following morning, eulogised the virtues of the deceased alderman, and spoke in fitting terms of the value of the public work in which he had always taken so active a part. The memorable words which have given rise to so much controversy since were as follows: "He (the coroner) could not help thinking that Alderman Barrow had carried the principle of total abstinence to extremes. It was a question of climate very largely. He himself had always held that during the first twenty-five years of life alcohol was only needful from time to time, but in the last twenty-five years it was necessary to make life long, strong, and healthy." As might have been

expected, this utterance of opinion brought about a shower of protests from the total abstainers. Figures, long lives, insurance statistics, chemical experiments, and personal experiences have been hurled against the statement of the coroner. As a medical man Mr. Pemberton possesses common sense and good judgment; these, combined with a long and careful observation of all classes both in health and disease, have led him to recognise the value of a moderate amount of beer or alcohol in the latter period of life. No one recognises to a greater degree the curse of drunkenness, or has a more pronounced hatred of excessive drinking. As a moderate man he practises and upholds the doctrine that temperance is a greater virtue than total abstinence. In the promulgation of such views he is sure to encounter the wrath of enthusiasts and fanatics.

Mason College.

The chair of Midwifery, vacant by the death of Mr. John Clay, has been duly advertised. At present two local candidates have announced their intention to aspire to it: Dr. Malins, obstetric officer to the General Hospital, and Dr. Parslow, obstetric surgeon to the Queen's Hospital. The Board of Medical Studies of the College recommend, and the Council elect to the office.

Medical Societies.

The medical societies of the town are already in full swing for the winter session. These are four in number, one meeting in the afternoon, and three in the evening. It has been questioned if there cannot be some concentration in the organisation of these so as to prevent similar subjects coming on at the different meetings. Certainly some arrangement of a friendly kind would save time and often add to the interest of the material brought forward. In a wide district with abundant supply of matter more substantial and accurate work could be got through with a little combined preparation on the part of the respective officials. The meetings would lose some of their perfunctory character and acquire a brighter and more decided chance of enjoyment.

Oct. 15th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Opening of the Durham College of Science at Newcastle.

THE event of the past few days has been the opening of the new wings of the Durham College of Science by the mayor. Before the college is perfect the principal front towards the Leazes must be erected at a cost of about £50,000—this in addition to the £30,000 required to free the institution from the present liabilities, which are a matter of so much anxiety to the management and form such a heavy annual charge upon the revenue. Last year over 1300 students attended the college, forming the largest attendance in its history.

The Proposed Salt Water Supply for Newcastle.

The proposed scheme of the Newcastle Corporation to supply salt water to Newcastle has been considered by the sanitary committee. In the course of a long discussion the city engineer explained that he had thoroughly considered the scheme, and it was his opinion that it was impracticable, as the cost would be so great. Information had been obtained from other towns supplying salt water to their inhabitants, and it had been found that those towns were in closer proximity to the sea than Newcastle. Ultimately it was decided to make a further investigation into the scheme before making a final recommendation to the council, and probably the matter is "shelved."

The Recovery of the Drowned.

At an ambulance meeting at Gateshead the examiner, Surgeon-Major Hutton, said, in reference to a policeman who was lately drowned while trying to rescue a man in the Tyne at Newcastle Quay, that he was of opinion that with proper measures promptly taken life might possibly have been saved.

The Tees Floating Hospital.

The members of the Tees port sanitary authority have inspected the floating hospital erected from plans drawn up by Mr. W. G. Laws, engineer to the Newcastle Corporation. The hospital, which is eighty-six feet long, rests on ten pontoons, and is built on the principle of the hospital at Jarrow. It consists of three blocks, the administrative buildings, which are well equipped, being in the centre. No. 1 Block is divided into two wards, one being an isolation ward. In No. 2 Block the wards are of equal size. The hospital has cost over £10,000.

Newcastle-on-Tyne, Oct. 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Examinations for the Triple Qualification.

THESE examinations are at present in progress in Edinburgh. The first examination both under the old and the new regulations was held last week, the second one being held this week, and the final begins also this week—viz., on Friday. The number of candidates presenting themselves under the new regulations is steadily increasing as each examination period comes round. At this examination there has been a large number of failures in the first professional subjects under the new system. The subject in which there have been most failures is, it is understood, physics, the level of teaching in that subject not yet having reached the standard expected by the examiners. A noteworthy feature of this examination is the improved accommodation which has been provided at Surgeons' Hall for the oral and practical part of the examinations. Formerly it was inconvenient and unsatisfactory in various ways. More additional rooms have been set apart, these having been provided for by clearing out rooms which were occupied by the officer of the college, while accommodation has been found for the latter by acquiring property adjoining the college. Two new waiting-rooms have also been provided for the students, one for men and another for women. The rooms now are almost all that could be desired; and it is understood that the improvements have been made by the college largely at the instigation of Professor Struthers, who, mainly if not solely, devised the necessary alterations and saw to them being successfully carried out. The rooms are not only more suited for their purpose, but are much more in accord with the dignity of the college.

Antitoxin Treatment of Diphtheria in Edinburgh.

It may be mentioned that the antitoxin treatment of diphtheria is being tested in the City Hospital here. It is understood that so far those who have had the opportunity of seeing the cases are satisfied, but no doubt in due time details will be forthcoming. Whatever the results may be, publicity is due to the profession as soon as satisfactory evidence has been accumulated either for or against it.

The Edinburgh Water-supply.

The Talla scheme for providing an increased water-supply for the city was before the Water Trust last week, and was approved by 16 votes to 4. They also gave instructions to take the necessary steps for proceeding with a Bill in Parliament subject to the approval of the scheme by the corporations of Edinburgh, Leith, and Portobello.

Another Hospital for Edinburgh.

Last week a new hospital, called the Church of Scotland Deaconess (Lady Grisell Baillie Memorial) Hospital, was opened in Edinburgh with considerable ceremony. It is situated in the Pleasance, one of the poorer parts of the town. The site cost £580, the building £2345, and furnishing and appliances £500. The total sum subscribed was £3400. The hospital contains 20 beds, and the estimated cost is from £30 to £40 per bed per annum, making an annual charge of £800. It was intimated that of this amount £500 had been promised for the first year and £300 for the second year. The building has been carefully and successfully constructed. On the ground floor are the doctors' room, a sitting-room, the matron's rooms, and the kitchen; on the first floor is a ward with nine beds, on the second a corresponding ward with a similar number of beds, while a small ward with two beds has been fitted up in the attics. The wards are bright, well-lighted, ventilated by Tobin tubes and extractors, and heated by means of large stoves. One-half of the beds are for medical and the other half for surgical cases. The nursing staff is to consist of a matron, two staff nurses, and three probationers. The causes which have led to the establishment of this hospital and the erection of another medical institution for the benefit of the sick poor in a city already rich in medical charities are of interest. There has existed for some time a body or society of ladies called the Church of

Scotland Deaconesses, for whom there is a home in Edinburgh where, on payment of a certain sum per annum, they are trained for mission work as teachers and evangelists. A certain number of them wish to have some training as nurses, but it is not sought to give them a complete and qualifying course of hospital instruction. For some time they were received into the Royal Infirmary, but the authorities there were so dissatisfied with the arrangement that they had to decline to receive them. The result of this was that those responsible for the Deaconesses' Home determined to get a hospital of their own where nurses could be trained for mission work, and the outcome has been this hospital. The hospital deserves nothing but praise, and those responsible for it may be congratulated on having secured Dr. G. A. Gibson and Mr. Alexis Thomson as, respectively, honorary physician and honorary surgeon to it. At the same time, it must be said that the multiplication of medical charities in an already over-burdened community does not commend itself.

Antitoxin at the City Hospital, Aberdeen.

In his last report Dr. Matthew Hay, medical officer of health, says: "It is of interest to mention that the new treatment of diphtheria by antitoxin, regarding which so much is being written at present as an almost perfect cure, is being tried in the hospital, and that, so far, encouraging results have been obtained. A little child sixteen months old was admitted with pronounced diphtheritic throat, and on the following day the disease was progressing so rapidly that the breathing was being seriously impeded and the case appeared to be hopeless. From the time of the injection of the antitoxin the child began to improve, and the breathing after one or two days became quite natural. As far as I could judge, the child's life was saved by the antitoxin."

Health of Aberdeen.

Last week 42 cases of zymotic disease were reported. Measles, scarlet fever, and whooping-cough are on the increase; diphtheria is on the decrease. For September the death-rate was 12·85 per 1000. In the preceding month it was 15·56, and in September of last year it was 17·66 per 1000. As regards the mortality at different age periods Dr. Hay's report says there is a remarkable fall at the infant period, the death-rate being only 28, as against an average of 42 for the corresponding month in the preceding five years.

The University of Aberdeen.

The winter session both at King's College and Marischal College opened to-day. A large number of students have already put in an appearance. The new university buildings are being rapidly pushed forward, and already the Mitchell tower is an imposing feature of the city. On the motion of the Lord Provost the town council have decided to confer the freedom of the city on Dr. Mitchell.

The Pathological and Clinical Society of Glasgow.

At the first meeting of the present session of this Society the following cases were shown:—Dr. R. M. Buchanan, an Aortic Aneurysm which had burst into the Œsophagus; Dr. D. Fraser, an Osseous Tumour of the Brain; Mr. H. E. Clark, a Kidney removed by Lumbar Nephrectomy; Dr. D. Newman, the Bacillus of Diphtheria—the Antitoxin used in treating the disease, reference being also made to some cases; Dr T. K. Monro, a Ruptured Bladder; Mr. Maylard, an Encysted Hydrocele of the Cord.

Public Health of Glasgow.

During the past week the Glasgow death-rate was 15 per 1000, which must be regarded as satisfactory, considering that scarlet fever is again so prevalent, there being 672 cases in hospital.

How to Spread Scarlet Fever.

During the past summer some scarlet fever patients were allowed to travel from Saltcoats (on the Ayrshire coast) to Glasgow while still capable of distributing infection. These cases were discovered in Glasgow, the sanitary officials of which city took energetic action, leading to a somewhat acrimonious correspondence and a reference to the Board of Supervision concerning alleged laxity on the part of the Saltcoats local authority. Dr. Littlejohn has investigated the matter and published his report, in which he seems to blame the two medical attendants concerned and to exonerate the local authority. In the first case the disease was so mild that the medical attendant's services were dispensed with at his second visit and his bill paid, his connexion with the case then ceasing; the other case also was so mild that after the second visit the medical attendant, unfortunately, at the urgent request of the parents, gave his consent to the removal of the patient to town after certain sanitary precautions had been taken. Of course it is the duty of medical men to maintain a rigid attitude on questions such as this, and to withhold their professional sanction from all proposed breaches of sanitary law; on the other hand, it is impossible to follow Dr. Littlejohn in his exoneration of the local authority. It is, surely, dangerous doctrine to say in an official report that "it is impossible for any local authority to keep a watch over the movements of certified cases of infectious disease." In a place so small as Saltcoats such surveillance should not only be possible but easy, and surely the watching of cases of infectious disease and the prevention of improper removal come well within the recognised duty of sanitary authorities, particularly in circumstances like those alluded to, where the medical attendant is only allowed to make a few visits and is then dismissed. One would have expected that the due certification of such cases threw the whole onus of watching on the local authority. This is no light matter, as Glasgow suffers grievously in this way, not an autumn season passing without the wholesale importation of scarlet fever, enteric fever, &c., from insanitary towns and villages on the coast in the country. It is to be hoped that Dr. Littlejohn's report will not make country local authorities even more lax than they now are.

Oct. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Richmond Lunatic Asylum.

AT the close of the past week there were about 150 lunatic inmates suffering from beri-beri in this asylum. The overcrowding of the asylum has been known to exist for the past three years, but little has been accomplished to remedy the evil. Pending the completion of the auxiliary asylum at Portrane, it has been suggested to locate the infected inmates in empty workhouses; but the authorities appear to regard this as ineligible, and three years since the inspectors of lunatic asylums, in their yearly report, stated that it would be cheaper to erect buildings than to utilise disused workhouses. They might, however, be suitable enough to accommodate the infected inmates alone. The site for the Portrane Asylum was selected by the Board of Control more than two years ago, and, it is said, is absolutely without any natural water-supply whatever, except a small well which every summer fails to supply water. It is stated that the board, in order to obtain water, propose to bring it from the Broad Meadow River, five miles distant, which will cause considerable expense in the formation of pumping stations and reservoirs, and may cost £40,000, to be added to the cost of the Portrane Asylum. The resident medical superintendent has on several occasions pointed out to the governors of the Richmond Asylum that it was questionable as to whether it would not be well to give up the asylum altogether, as the site could probably never be made a healthy one for an institution of the kind, and he has drawn attention to the constant existence of dysentery, apparently similar to the malarial dysentery of the tropics, which is endemic among the inmates. A male patient named Denis Kinsella died on the 27th ult. from coma due to fracture of several ribs of both sides and rupture of the liver. It is considered that these injuries were inflicted by some of the warders, and after investigation one attendant was suspended and a second dismissed. As the matter is in the hands of the police I can add nothing more at present.

Catholic University Medical School.

A report upon the working of the school for the past two years under the new constitution was last week presented by the Rector of the Catholic University to the Roman Catholic Archbishop of Armagh and the other Roman Catholic archbishops and bishops of Ireland. I learn that of late the medical school has shown a considerable increase in the number of students attending lectures. Last year it was about 120, but this year it is stated to be beyond 200. It is not stated whether these 200 were for the anatomical classes; in the case of the latter, the returns are not obtainable until Nov. 25th, so it is probable that they do not represent these entries. The Rector states that on an average 40 per cent. of the students go through the curriculum of the Royal

University of Ireland. He claims that a public endowment is necessary and could be usefully applied.

Dublin Orthopædic Hospital.

The inmates of this institution, through the kindness of the Countess of Mayo, were enabled to spend the summer months in a furnished house at Johnstown, and in recognition of her kindness the Countess has been elected a life governor of the hospital.

Attack on a boy by a Rabid Cat.

A boy sixteen years old, while walking at Clonlyon, King's county, on Saturday last, was attacked by a cat, which sprang upon him and bit him in the thigh and the little finger of the left hand. The cat was flung to the ground, but again attacked the boy and bit the left hand severely until it was choked. A veterinary surgeon who examined the carcase pronounced the cat to have been suffering from rabies. The patient will be sent to the Pasteur Institute, Paris, for treatment.

Oct. 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Chloroform Inhalation and its Action on the Heart.

AMONGST the most interesting papers read at the Eighth Congress of French Surgeons (which for the first time was this year held outside Paris—viz., at Lyons) was one by M. Alphonse Guérin of Paris on the Rationale of Heart-failure during Chloroformisation. That authority (whose name will be familiar to students of surgical progress as the originator of the cotton-wool or germ filtration method of dressing wounds) maintains that chloroform vapour does not act directly on the heart muscle, but that when this fails to contract it does so by virtue of a reflex paralysing influence through the medium of (*a*) the nasal nerves and (*b*) the pneumogastric nerve. M. Laborde some time ago demonstrated the lethal effects of chloroform on a rabbit which is made to inspire it by the nose. He thought that the reflex path was by way of the nasal nerves and the superior laryngeal nerve. At M. Guérin's suggestion, M. Laborde's experiment was modified as follows. Tracheotomy is performed, and chloroform administered through the trachea, with the result that the heart continues to beat normally; but when in this same animal the inhalation was in its turn practised through the nose the heart-beats ceased immediately. M. Guérin asserts that death from this cause will become a matter of history if, in administering this anæsthetic, care be taken to prevent the introduction of the vapour into the nasal fossæ by compressing the nose between two fingers of the hand holding the inhaler or the compress (the latter is almost universally employed in France). Anæsthetists and the public generally will, I am sure, rejoice should M. Guérin's prediction prove to be correct.

Suggestion as a Remedy against Delirium in the Insane.

Dr. Voisin of the Salpêtrière Hospital calls attention to the curiously rapid and satisfactory action of hypnotic suggestion in dispelling delirium and hallucinations in the insane. Directly suggestion is completed calmness succeeds to the previous agitation. Very frequently, however, hypnosis seems to be an impossibility in the insane. Dr. Voisin surmounts the difficulty by previously inducing partial anæsthesia by small doses of chloroform. Another useful preliminary proceeding is the administration of a very strong galvanic shock. The object of these preparatory measures (anæsthesia and electric shock) is to render the patient momentarily insensible to his mental preoccupations. The opporunity is then seized to hypnotise him in the usual manner.

The Contagion of Cancer.

Any information capable of shedding a new light on the nature of that mysterious disease, cancer, is eagerly welcomed by the profession. Some facts in this connexion brought forward by Dr. Guelliot of Reims at the Lyons Surgical Congress on Oct. 9th will accordingly be found interesting and instructive by the readers of THE LANCET. The experiments of Hanau and those of Morau recently reported in the *Archives de Médecine Expérimentale* prove that cancer can be grafted on to animals of the same species. Experimental hetero-inoculation is thus an established fact; spontaneous or accidental hetero-inoculation is, therefore, possible. It is to clinical observation that inquirers must have recourse in order to clear up the question, and false deductions are more easily avoided when these observations are made in country districts where the pathological antecedents and mode of life of the population are well known. The very unequal distribution of the disease is an extremely striking phenomenon. Thus 100,000 persons in Paris or Rheims supply 100 victims, the corresponding figures for a village in the Ardennes and a district of the Aisne respectively being 266 and 1400. Instances have again been known of the inhabitants of a particular district of a town or a group of houses being especially visited by the disease. Nay, habitations that may fitly be designated as cancer houses have been known to exist, where three or four denizens have been successively victims of cancer. Dr. Guelliot has collected fifteen such examples, yielding fifty victims. It would seem that nothing short of contagion could explain the foregoing. More instructive still are examples of cancerous affections appearing successively in two persons living constantly under the same roof (*cancer à deux*). Dr. Guelliot cites 103 such instances, 42 of these having been noted by himself. Of these 103 examples 14 had reference to co-lodgers, relatives, and masters and servants, and 89 (or more than four-fifths) to husband and wife. The transmission may be direct (through penis and uterus), but more frequently it is effected indirectly through wearing apparel or table utensils. Twice inoculation occurred through a tobacco pipe. In more than one-half of 64 cases of *cancer à deux* the interval separating the appearance of tumours in the two persons was under two years. In 26 instances the cancer was homotopic (affecting the same organ); in 97 heterotopic. Dr. Guelliot opines that the influence of heredity is exaggerated. At most only 12·5 per cent. come under this heading, and if account be taken of persons who, born of cancerous parents, reach extreme old age the proportion is reduced to 5 or 6 per cent. (from the statistics of fifty old men ranging from seventy to ninety years of age). He knows of nine examples of practitioners attending special cases of cancer who contracted the disease. Dr. Guelliot concluded his powerful argument in favour of the contagious nature of cancerous tumours by remarking that, although the appreciation of the danger incurred by individuals brought into contact with patients of this class may frighten the public, it is always preferable to look facts, especially disagreeable ones, in the face, and counteract risks of the kind by precautions based on the dictates of common sense.

The new Treatment of Diphtheria.

The subscriptions now being received by the *Figaro* for the foundation of an antitoxin department at the Institut Pasteur, whose business it will be to supply the vaccine to the practitioners of France, reach to-day the total of 255,539 fr. 70 c. The Budget Commission has, on the proposition of M. Rouvier, voted 100,000 fr. as a subvention to the Assistance Publique for the same purpose. It remains for the Chamber to confirm this vote. The Municipal Council has instructed its Special Commission to arrange with Dr. Roux for the distribution, at the Council's expense, of serum to different depôts to be created in Paris. The Comité Consultatif d'Hygiène Publique de France, at its meeting yesterday at the Ministry of the Interior, resolved to address a congratulatory letter to Dr. Roux and his illustrious master, M. Pasteur, and also to ask of the Government an annual credit to facilitate the diffusion of the antitoxin. The enthusiasm shown in favour of the movement is extraordinary. For example, a livery-stable keeper offers a horse to the Pasteur Institute to serve for the preparation of the serum. A vote of 10,000 fr. will be proposed at the next meeting of the Conseil Général de la Seine. Numerous prefects of departments having addressed inquiries to the President of the Council, who is also Minister of the Interior, on the value of anti-diphtheric seropathy, the Minister referred the question to the Academy of Medicine, which body named a Commission to study the matter. The Commission, composed of MM. Bergeron, Proust, Cadet de Gassicourt, and Strauss (reporter), to-day delivered its conclusions, which I transcribe *verbatim*: "Votre commission vous propose donc d'émettre un avis favorable sur l'emploi du sérum antidiphthérique et de formuler, en outre, les vœux que l'Institut Pasteur soit mis en mesure de faire face aux demandes qui pourront lui être faites, soit par les médecins, soit par les pouvoirs publics."

Oct. 16th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

Medico-legal Case.

DR. WRIGHT of Westport has recently been overtaken by misfortune. It seems that in September, 1893, one of the members of his Lodge—the Oddfellows—sustained a severe injury in the region of the left shoulder. Dr. Wright diagnosed a dislocation of the left humerus, complicated with a fracture through the surgical neck. He succeeded in reducing the dislocation and also in getting the fragments into good position. He verified this by measurement and comparison. He states that his instructions regarding keeping the bandages &c. in position and perfect rest in bed had not been carried out, and as a result redislocation ensued. A consultation was held on Nov. 7th with another practitioner, Dr. Macdonald, who disagreed with Dr. Wright about both diagnosis and treatment. He suggested that it had been a simple dislocation and improperly treated, but Dr. Wright declined any further attempts at reduction until good union had taken place in the fracture. Dr. Gaze of Wellington also saw the case and likewise failed to find any fracture. The patient then went to the Wellington Hospital for treatment, where unsuccessful attempts were made to reduce the dislocation. In April last Ferguson, the patient in question, brought an action against Dr. Wright claiming £500 damages. Judge Ward summed up greatly in favour of the defendant from every point of view. The jury, consisting of four only, retired, and returning again and again for "information," finally announced that they found £250 special and general damages against the defendant. The judge expressed great dissatisfaction at this verdict, and it seems deplorable that an application for a new trial and change of venue, which was promptly made, could not be carried out. Great sympathy is expressed by the members of the profession in New Zealand towards Dr. Wright, more especially as it appears that a well-known surgeon at Dunedin had an opportunity of examining the arm of this man Ferguson recently, and did find indications of an old fracture in the region of the surgical neck. Dr. Colquhoun of Dunedin is interesting himself in a practical manner in this case, and an appeal to the members of the medical profession in New Zealand on behalf of their unfortunate brother will, I feel sure, be very heartily responded to.

Auckland Tobacco Poisoning Case.

Beard, the herbalist, who was prosecuted for selling a decoction of tobacco for the purpose of treating a patient suffering from worms, and thereby causing the death of the little boy—to which I referred by the last mail—has been committed for trial on a charge of manslaughter.

Thomas Watt Bell, M.B.

If there were any need of evidence as to the great esteem and affection in which the late Dr. Thomas Watt Bell was held it was amply shown by the large attendance at his funeral, which took place—as the mail was leaving—in the Wanganui cemetery. Dr. Bell fell a victim to pleurisy, following a severe attack of influenza, aggravated by endeavouring to adhere to his duties when he should have been taking care of himself—the old, old story, which has brought about the end of so many medical men. The deceased was born in Wanganui in 1860, and showed such promise at school that his father, Mr. Peter Bell of Wanganui, sent him to Otago to study medicine. Being very successful in Dunedin, he went to Edinburgh to complete his studies, and that so successfully that he soon obtained the M.B. and C.M. degrees. He then went to Paris and Vienna for a time, and returned to London in 1884. The s.s. *Mararoa* was about to sail on her maiden trip to New Zealand and the late Dr. Bell applied for and obtained the position of surgeon on board. Arriving at Wellington he quickly returned to his old home, and was soon appointed on the medical staff of the Wanganui Hospital, which post he held for some time. Wishing, however, for a wider sphere he proceeded to Auckland, and was appointed to the resident staff of the hospital in that city, which position he held for two years and only relinquished it to go into private practice at Wangarei. About eighteen months ago, however, he once more returned to his old home, Wanganui, and at the time of his death held the position of surgeon to the local hospital. His death is doubly sad when it is reflected that he was only thirty-four years of age, and that he was beloved by the community for his unassuming manner and his amiable disposition. He was courteous, gentle, and charitable, and beloved by his medical *confrères*. His coffin was hidden by crowns and wreaths, one of the most prominent of which bore the inscription: "From the medical profession of Wanganui, with sincere regret and esteem."

Obituary.

WILLIAM ALEXANDER GREENHILL, M.D. OXON.

BY the death of William Alexander Greenhill, who was distinguished alike in literature and in medical science, the members of our profession have lost an indefatigable worker, a polished gentleman, and an erudite scholar. As we have already recorded, he died on Wednesday, Sept. 26th, at Hastings, in his eighty-first year. His last illness was of brief duration. Seized in the early morning with an affection of the heart, he had passed away before medical aid could be obtained. By his death an important link between the literature of the present day and that of the earlier part of this century has been severed.

Dr. William Alexander Greenhill was descended from an ancient landed Hertfordshire family, and was born on Jan. 1st, 1814. His father was treasurer to Stationers' Hall. At the age of fourteen he entered Rugby School during the first year of Dr. Arnold's tenure of the headmastership. Amongst his schoolfellows were Arthur Penrhyn Stanley, Arthur Hugh Clough, Charles John Vaughan, and William Charles Lake. In 1832 he entered at Trinity College, Oxford. The teaching there at that time did not evoke the sympathy of Arnold's pupil and led to a correspondence with his old master. In "Stanley's Life" Dr. Arnold's reply to "old pupil A." will be read with additional interest by medical men when they learn that it was addressed to Greenhill. He took his M.B. degree in 1839, and two years later his M.D. Dr. Greenhill also studied in Paris. He resided in Oxford for the next twelve years. During this time, besides acting as one of the physicians to the Radclyffe Infirmary, he was a diligent student in the public libraries. His evidence on the subject of public libraries was given before the Oxford University Commissioners in 1851, and is specially quoted in their report. He made various contributions to medical literature, of which it is sufficient to mention his "Greek and Latin Edition of the Physiology of Theophilus" (1842), his "Latin Edition of Sydenham's Works" (1844), and his "English Translation from the Arabic of the Treatise of Rhazes on the Small-pox" (1847). All these works were well received both by the English and the foreign medical world, and with respect to the "Theophilus" the late Dr. Francis Adams (himself one of the most learned medical scholars of his day) said in a notice of the work:[1] "We look upon this as being decidedly the best edition of an ancient medical author with which we are acquainted." The whole of the medical articles in Dr. William Smith's Dictionaries of Greek and Roman Antiquities and Biography (1842-49), which still form the most complete series in existence of the lives of the ancients of medical interest, were from his pen. In proof of his wide reputation as a scholar it may be mentioned that three continental scholars dedicated one of their works to him, and also that the late Dr. Mayne dedicated to him his "Dissertation on Scientific Nomenclature" (1849), which was afterwards prefixed to his Expository Lexicon (1860). But Dr. Greenhill was also distinguished in the domain of practical medicine and devoted considerable attention to sanitary reform. The outbreak of cholera at Oxford in 1849 directed his attention to sanitary questions, and (after taking part in actively combating the disease) he assisted in preparing for the Ashmolean Society a series of reports on the mortality and public health of Oxford, with an appendix containing an account of the epidemic cholera in that city, founded on statistical data and his own experience. These reports have been frequently alluded to, and Dr. (now Sir Henry) Acland mentions the work with commendation in his "Memoir on the Cholera at Oxford in the year 1854." These were the first reports of the kind that had then been published in any provincial city, and

[1] Brit. and For. Med. Rev., vol. xv., p. 441.

were likewise thought worthy of special commendation by the Registrar-General. In 1850 Dr. Greenhill also submitted to the French Government a proposal for the registration of the causes of death, which was an extension of the English system. He assisted the late Dr. Benjamin Jowett in translating "Plato," and was particularly consulted in the production of the "Timæus."

Dr. Greenhill was in the heart of the Tractarian movement, and was Newman's churchwarden at the time he resigned his incumbency in St. Mary's and entered the Roman Church. He knew Dr. Pusey intimately. He was the chairman of the local election committee during Mr. Gladstone's first Oxford candidature. The failure of his wife's health, who was a niece of Dr. Arnold of Rugby, compelled him to leave Oxford and take up his residence in Hastings. During the long period—more than forty years—of his connexion with that town his work on behalf of sanitation was as indefatigable as it was unostentatious. Up to the time of his death he continued to take the utmost interest in sanitary matters. In order to ascertain the average mortality in Hastings from different diseases (which was not at that time to be found in the Registrar-General's reports) he analysed the civil registers for a considerable number of years. At the International Statistical Congress at Paris in 1855 he took part in the discussion (in committee) on the nomenclature and classification of the causes of death, and at the meeting in London in 1860 he acted as secretary of the Sanitary Section jointly with Dr. John Sutherland and the late Dr. McWilliam. The connexion between zymotic diseases, filth, and overcrowding (which was a comparatively new discovery thirty years ago) induced him to endeavour to apply a practical remedy to these local evils. In 1857 he assisted in founding the Hastings Cottage Improvement Society, which, on account of its unusual success, has attracted a considerable amount of attention both in this country and abroad. In 1860 he aided in establishing the "London Labourers' Dwellings Society" on the same plan as the society at Hastings, and continued to act as secretary till 1875. Dr. Greenhill also took part in the inquiries instituted in 1835 by the Society of Arts, and in 1874 by the Charity Organisation Society (an inquiry which was resumed in 1880), into the best modes of improving the dwellings of the industrial classes. At Hastings he acted as honorary physician to two of the public charities of the place—viz., the Infirmary and the Home for Invalid Gentlewomen—and also aided in establishing and conducting several scientific and benevolent institutions, which are still useful and prosperous—viz., in 1851, the Medico-Chirurgical Society; in 1855, the Mendicity Society; and in 1857 the Medical Friendly Society. Dr. Greenhill's public services secured him the award of a Civil List pension during Lord Beaconsfield's Premiership.

An intimate friend of his, in summing up his character and manner, remarks that: "He was eminently a devout man, but was of a somewhat uncompromising and argumentative nature, even at times to captiousness. He was precise in speech and manner, somewhat narrow, and, to use a familiar expression, puritanical and of very abstemious habits. He was withal most kind and helpful to all who sought his aid and advice. It should not be forgotten that, in addition to his contributions to biographies and general dictionaries, he was the authority for the medical and surgical parts of the great Greek Lexicon of Liddell and Scott." Nor must we, in conclusion, forget that, orthodox as he was, he edited a beautiful edition of the Religio Medici of Sir Thomas Browne, whose wide toleration failed not to render the "courtesy of the hat and the hand" in accordance with the ritual of any communion in which for the time being he found himself. The classical physician of the past is fast disappearing from our midst. It is the more necessary that the memory of the latter-day examples should be preserved and held dear by the profession to which by their lives' actions they have done honour.

MEDICAL MAGISTRATE.—Mr. James J. Harding has been placed upon the Commission of the Peace for County Cork, Ireland.

THE MEDICAL OFFICER FOR HOLBORN.—The Board of Guardians of Holborn have granted Dr. S. Gibbons, their late medical officer, a retiring pension of £50 per annum.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

(FROM A SPECIAL CORRESPONDENT.)

THE twenty-second annual meeting of the American Public Health Association was held in Montreal from Sept. 25th to 29th, 1894. The session was opened on Tuesday morning at 9.30 in the Young Men's Christian Association, the auditorium of which was nicely draped with the insignia of the United States, Canada, and Mexico, the three countries included in the purview of the Association.

The first paper presented was by Mr. H. F. Nuttall, Ph.D., of Johns Hopkins University. It was entitled "Hygienic Notes of a Journey through Italy in 1894." It was read by Dr. Gihon, U.S.N. An account was given of the water systems &c. of Naples, Rome, and Florence, comparing the advantages of the modern conditions with the old-time defects; to Florence was given the palm as the cleanest city. The destruction of dogs is effected by charcoal fumes, the rabid ones being in a compartment by themselves. Cremation was introduced into Italy in 1876, the first being in Milan; twenty-one towns possess crematoria. The cost of a cremation funeral varies from 40 to 100 lira. The annual burnings are 65, mostly men.

"The Cart before the Horse" was the title of a paper by Dr. B. Lee of Philadelphia. The epigram was intended to call the attention of builders and others to the necessity of first arranging for the getting rid of excreta—that is, drainage—before putting in costly water fittings—that is, the intakes. Illustrations were given of costly mansions in country places where everything was all right as to water coming in, but the getting rid of the drainage proved a nuisance to the neighbours.

"Sedimentation in Water" was the title of a paper read by Dr. Wyatt Johnston of Montreal. Observations of the water-supply of Montreal, which is really Ottawa water and comes in by an aqueduct of six miles, were shown in charts. The points brought out were that a settling basin did not appreciably affect the number of bacteria and that sunlight was not as effective as generally supposed, as it did not penetrate deep enough. Oxygen and time, he considered, did the business. He was also dissatisfied with sand filtration. In the course of his observations he had made the curious discovery of a starch indistinguishable from that of corn-starch (*Zea mais*) in a water free from the suspicion of drainage or of the débris of a starch factory; it proved to be the starch of white pine (*Pinus strobus*) from the waste of a saw-mill on the Ottawa using this tree in the manufacture of lumber.

"The Long Island Water Basin, Brooklyn's Reservoir," was the title of an account by Dr. Bell, editor of the *Sanitarian*, of the Long Island basin, which could supply 2,000,000,000 gallons of water per annum, and, therefore, presumably sufficient for Brooklyn's needs for all time. Mr. F. T. Shutt, of the Dominion Experimental Farm, Ottawa, noted the ignorance which prevails as to the proper location and preparation of wells for drinking water, made manifest by the correspondence and operations of his department.

Mr. G. W. Fuller, Ph.D., of Lawrence, Mass., discoursed on the Benefits of Land and Loam Filtration. A five-foot deep filter with good fine sand would pass four to six millions of gallons per acre per day; continuous filtration was better than intermittent, a result amounting practically to sterilisation being obtained. Experimentally, bacteria prodigiosa were used, and the removal of 97 to 99 per cent. was accomplished. The dangerous species of bacteria are the first to disappear, being in unnatural surroundings. The saprophytic species are most beneficial to man. Filtration is nature's process; chemicals and heat require man's attention. Alum (half a grain to one and a half grains per gallon) is unobjectionable in clearing a murky looking water. In the discussion which followed it was stated that the experience in Toronto was that bacteria have their seasons of growth, being most plentiful in winter, especially in February.

The presence of bacteria indicates also that of their food, for "wheresoever the carcase is there will the eagles be gathered together." In taking samples, remember that each layer of six feet of water is different, the middle layer having the least.

At the afternoon session Mr. Hodgetts of Toronto related his experience in the Management of Epidemics of Diphtheria

in the Rural Districts. Dr. Bryce of Toronto spoke of the Difficulties of Medical Health Officers in dealing with suspected cases of diphtheria; the attending physician not having made up his mind on the diagnosis could not or would not notify. Dr. J. E. Laberge, the newly nominated bacteriologist of the Board of Health, Montreal, related his observations at the Pasteur Institute, Paris, in the matter of prophylactic vaccinations. Dr. J. D. Griffith of Kansas presented a paper on the Innocuous Transportation of the Dead. He recommended a metal-lined, air-tight compartment on every train, to be devoted to this duty. In the discussion which followed Dr. Hingston of Montreal considered that transportation of the dead in trains should be forbidden.

The evening session of the first day was devoted to a formal opening in Windsor Hall. In this fine hall the members with their lady friends assembled to hear speeches. The speakers were Dr. Craik, Dean of McGill College, the Governor of Quebec, Mr. J. A. Chapleau, one of his Ministers, Hon. L. P. Pelletier, Mayor Villeneuve, and others. The Mexican speaker was Dr. Gregorio Mendizabal of Orizaba, a member of the Mexican Ministry. This gentleman's address, though in the Spanish language, and therefore not generally understood, frequently "brought down the house," his flowing periods and effective gestures showing him to be a born orator.

The sessions of the second day commenced with an account of the Culture and Collection of Vaccine Lymph by Dr. E. Gauvreau, Director of the Institut Vaccinogène, St. Foye, Quebec. This institution, which furnishes most of the vaccine used in Quebec, receives a small subsidy from the Provincial Government. If all the care mentioned in the paper is exercised every time, the vaccine furnished from that place would be very satisfactory. Dr. Walsh of Washington, a purveyor of vaccine, discoursed on the same subject. He considered it now settled that vaccine is transformed variola. His process was to puncture the shaved buttocks of animals of light-coloured hair. These animals are kept upright by a frame until the lymph is ready, to prevent soiling by lying down; only the clear lymph is taken and dried on ivory points. He assured his hearers that it was real ivory sterilised which he used. He stated that he had been accidentally inoculated on the thumb during his operations.

Dr. Wordin of Bridgeport, Conn., spoke on Tuberculosis, its Restriction and Prevention. He considered the sputum as the *fons et origo mali;* our efforts should be directed to this. "Thou shalt not kiss" is a commandment to every phthisical patient. Dr. P. Paquin of Missouri presented a plea for the prevention and discouragement of the marriage of those suffering from phthisis. The children's rights should be considered, the important one being a right to be born healthy. In the discussion which followed this paper it was generally held that any interference by legislation with the marriage of sick persons was out of the question.

The afternoon session of the second day was omitted, the time being given to one of the entertainments provided by the local committee. The members and ladies were taken to Lachine in a chartered steamer, and given the experience of shooting the Lachine Rapids, a trip much appreciated.

In the evening session of the second day the matters brought up were treated in a manner which was popular rather than deeply scientific. First, Dr. Montizambert, Superintendent of Canadian Quarantines, described the departments and operations of his establishment at Grosse Isle, the key of the St. Lawrence. He showed a series of beautiful photographs on a screen illuminated with the calcium light. Dr. Cameron, Professor of Pediatrics at the McGill College, discoursed at length on the Hygiene of the Young in Schools. He had with him crooked spines, distorted pelves, and illustrations of unsymmetrical and stooping children. The point was made that with the advance of civilisation and education the flexors got ahead of the extensors, round shoulders being always forwards and not backwards. The paper was to a certain extent an arraignment of the public school system for insufficient attention to the physical condition of the scholars. Unsuitable desks and other avoidable conditions were held responsible for the stooping and lopsidedness. Dr. Cameron, however, failed to indicate a desk which would keep a child straight in spite of himself.

Mr. John Mitchell of New York dealt with Plumbing in Sanitation, giving an account of the origination, operations, and benefits of the legislation secured in New York State pertaining to plumbing. Plumbers now have to submit t an examination.

Dr. T. D. Crothers of the Walnut Lodge Retreat, Hartford, Conn., presented a paper on the Influence of Inebriety on Public Health. Figures were given indicating the enormous cost in lives and money of the drinking habits of society. It was strongly urged that inebriates should be considered as sick persons and treated medically rather than morally. In the discussion which followed it was made manifest that the Association could not be counted on as being particularly strong for total abstinence. Dr. Campbell of Bellows Falls presented the following: "Resolved that the American Public Health Association in convention assembled records its protest against the use of alcohol as a beverage, especially by the young, and considers that its use is attended with great danger to the individual and society." This resolution was referred to the executive committee, and that body substituted the following: "That a committee of three be appointed to investigate the question and report at the next convention."

A report to the committee on the Pollution of Water-supplies, by Dr. Smart, major and surgeon of the United States army, was a lengthy document, relating what had been done in collecting and arranging information from different parts of the United States. The report noted favourably a suggestion, originating with Drs. Adami and Johnston of the Pathological Department of McGill, for the coöperative investigating of bacteria, to remove some of the confusion of differently naming the same species and the supposed discovery of new species, observers in one district to limit themselves to one kind and others to some other, the work being too extensive for one worker.

(To be continued.)

Medical News.

EXAMINING BOARD IN ENGLAND OF THE ROYAL COLLEGES OF PHYSICIANS AND OF SURGEONS.—The following gentlemen passed the Second Examination of the Board, at a meeting of the Examiners on Monday, the 8th inst., in the subjects indicated:—

Anatomy and Physiology.—Walter Rains and Frederick William Edward Courtenay, Owens College, Manchester; John William Watson, James Ernest Long, and Robert Willcox, University College, Bristol; Charles Claridge Pratt, St. George's Hospital and University College, Bristol; Robert Morrison Clark and William John MacKeown, Queen's College, Belfast, and Royal University of Ireland; Thomas Joseph Kenny, Queen's College, Belfast, and the Catholic University, Dublin; James Battersby, St. Mungo's College, Glasgow; Charles Black, Firth College, Sheffield; William John Howard Williams, St. Mary's Hospital; Octavius Charles Andrews, Mason College, Birmingham; Reginald Threlfall Bailey, University College, Liverpool; and Arthur Edward Gladstone, St. Thomas's Hospital.

Anatomy only.—Edward Thomas McDonnell, Queen's College, Belfast, and the Catholic University, Dublin; and William Ernest Fairweather, Owens College, Manchester.

Physiology only.—Thomas Preston Yates and Herbert Blackemore, Owens College, Manchester; Thomas John Davies, Middlesex Hospital; and Percy Houghton Stratton, Mason College, Birmingham.

Fifteen gentlemen were referred in both subjects, four in Anatomy only, and two in Physiology only.

Tuesday, the 9th inst.:—

Anatomy and Physiology.—Percival Wood, Charles Franks Winkfield, Edward Francis Palgrave, Cecil Wilmot Mainprise, and Gerald Rumsey Baker, St. Bartholomew's Hospital; Alfred Edmond Weld, Charing-cross Hospital; Francis Ley Augustus Greaves, St. Thomas's Hospital; Harold John Chater, Joseph Bartlett Addison, St. Mary's Hospital; George Chetwoode Owsley, Montague Harold Way, Guy's Hospital; Robert Basil Stamford, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology; Robert Charles Rumbelow, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; Reginald John Stilwell, Westminster Hospital; and Joseph Holbrey Morton, London Hospital.

Anatomy only.—Elliot Wilson Woodbridge, St. Bartholomew's Hospital; Thomas Joseph Vick, Guy's Hospital; and Arthur Lionel Hall Smith, University College, London.

Physiology only.—Harold Charles Harrison, St. Bartholomew's Hospital; Arthur Cyril Bird, St. Thomas's Hospital; Stanley Wellby, Oxford University and St. Thomas's Hospital; John Herbert Crangle Fegan, Charing-cross Hospital and Mr. Cooke's School of Anatomy and Physiology; Herbert Markby, Yorkshire College, Leeds; Louis Alexander Weatherhead French, University College, London; and Martin Innes Baker, St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology.

Fifteen gentlemen were referred in both subjects and four in Anatomy only.

Wednesday, the 10th inst.:—

Anatomy and Physiology.—Dinshah Burjorjee Behramjee, Grant Medical College, Bombay; Cuthbert Howard Ralston Provis, St. Bartholomew's Hospital; Herbert Jennings Gibbs, Madras

Medical College; Charles Charnock Smith, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; John Griffith Owen, Charing-cross Hospital; Robert Maxwell Cooper, Western University, Ontario, Canada; and August Brewer, Freiburg and Munich Universities.

Anatomy.—John Benjamin Augustus Treusch, Guy's Hospital; Frederic John Waldmeier, Protestant College, Beyrout, and London Hospital; Robert Lansdowne Storrar, St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; John Henry Pegg, Cambridge University and St. Thomas's Hospital; George Lestock Thornton, St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology; Arthur Orsborn Way, Hugh Giffin McKinney, and Bertram Eustace Laurance, St. Bartholomew's Hospital; and Richard Loy Wilcox, University College, London.

Physiology.—James Herbert Powell, Robert Douglas Dobie, and Alexander Michael Ross, King's College, London; Albert Ernest Street and Langford Newman Lloyd, Charing-cross Hospital; Sidney Herbert Longhurst, John Edward Hocking Parsons, George Bruce Pearson, and John Ponsonby, Guy's Hospital; Benjamin Lewitt, St. Mary's Hospital; Hubert Richard Rice, Mason College, Birmingham, and London Hospital; Thomas Burnell Jones, St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; and David Price, St. Thomas's Hospital.

Twelve gentlemen were referred in both subjects, eight in Anatomy only, and five in Physiology only.

Thursday, the 11th inst.:—

Anatomy and Physiology.—Harry William Henshaw and Algernon Fountain Page, students of St. Bartholomew's Hospital; John Henry Jones, Guy's Hospital; Henry Cadman Whiteside, Middlesex Hospital; Thomas Cadarn Reece, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; Reginald William Clark, London Hospital; Thomas Pearson, Charing-cross Hospital; Adolph Sandner, Rush Medical College, California, and St. Mary's Hospital; Ratanshaw Dinsha Dalal, Grant Medical College, Bombay.

Anatomy only.—Sydney George Butler and Edward William Clapham, London Hospital; George Secretan Haynes, William Harold Crossley, William Leopold Burn, and Sidney Roach, St. Bartholomew's Hospital; William Henry Gray, University College, London; Alfred James Andrew Lennane, University College, London, and Mr. Cooke's School of Anatomy and Physiology; Alan Grant Eastment, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; Robert Sibbald Rowland, Cambridge University and Guy's Hospital; Ernest Thomas Longhurst, St. Mary's Hospital; and Charles Fenwick Backhouse, King's College, London.

Physiology only.—Lionel Jasper Bartlett, St. George's Hospital; Reginald Thomas Richmond, Cambridge University and Mr. Cooke's School of Anatomy and Physiology; Henry Charles Meacock, St. Thomas's Hospital; Bernard Holländer, King's College, London; Alfred Edward Binnington Crosby, Guy's Hospital; and James John Haverson, London Hospital.

Six gentlemen were referred in both subjects.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following gentleman, having previously passed the necessary examinations and conformed to the by-laws and regulations, and having now attained the legal age of twenty-five years, was, at the quarterly meeting of the Council on Thursday, the 11th inst., admitted a Fellow of the College:—

Griffin, William Watson, M.B., B.Ch. Otago, of Otago University and Dunedin Hospital, New Zealand, and London; Diploma of Member dated Nov. 15th, 1893.

UNIVERSITY OF DURHAM FACULTY OF MEDICINE.

At the Convocation held on Saturday, Sept. 29th, 1894, the following degrees were conferred:—

Doctor in Medicine for Practitioners of Fifteen Years' Standing.—E. Birt, D. Elcum, J. T. Jones, A. Kinsey-Morgan, C. H. Penny, C. H. Phillips, G. Rice, R. Samuel.

Doctor in Medicine.—J. V. Blachford, T. Carr, W. J. Durant, G. Elam, W. A. Hatton, G. G. Howitt, G. J. C. Thomson.

Bachelor in Medicine (M.B.).—Honours—Second Class.—T. Horton, W. E. Alderson, J. C. Hoyle, E. J. Brewis, J. W. Summerhayes, R. A. Dunn, A. E. Merewether.

Bachelor in Medicine (M.B.).—Pass List.—C. H. Bryant, H. S. Byers, F. A. Cooke, L. Harman, J. O. Hollick, H. G. McAllum, R. A. Morris, E. F. J. Norman, H. Simmons, F. H. Simpson, P. H. Wardell-Johnson, W. M. Whitehouse, F. J. I. Willey, P. Withers, C. R. Wood, E. E. Woodhouse.

Bachelor in Surgery (B.S.).—W. E. Alderson, E. J. Brewis, C. H. Bryant, R. A. Dunn, T. Horton, J. C. Hoyle, W. D. Johns, H. G. McAllum, A. E. Merewether, R. A. Morris, E. F. J. Norman, H. Simmons, F. H. Simpson, P. H. Wardell-Johnson, W. M. Whitehouse, F. J. I. Willey, P. Withers, C. R. Wood, E. E. Woodhouse.

Bachelor in Hygiene (B.Hy.).—R. B. Duncan, E. Mitchell.

Diploma in Public Health.—H. Renney, H. Shore.

ROYAL UNIVERSITY OF IRELAND.

The following have passed the First Examination in Medicine:—

H. Anderson, J. Barbour, W. Beatty, E. Cantillion, A. W. Crawford, J. Cronin, H. Donnelly, J. Franklin, G. Grills, W. Hagerty, G. Keating, T. Little, J. Lynch, M. Lyons, D. McCay, H. McMaster, J. Martin, A. Murphy, T. Nyhan, T. O'Keefe, J. F. O'Mahony, J. J. O'Mahony, J. O'Sullivan, W. Rice, J. Richardson, H. Ryan, J. Shea, J. Twohig, W. Waugh, and S. Woods.

The following candidates may present themselves in honours in the subjects mentioned:—

A. W. Crawford, Experimental Physics; G. Grills, Botany, Zoology, and Experimental Physics; G. Keating, Botany, Zoology, Chemistry, and Experimental Physics; T. Little, Botany, Zoology, and Chemistry; J. Lynch, Experimental Physics; D. McCay, Botany, Chemistry, and Experimental Physics; W. Rice, Botany, Zoology, and Experimental Physics; H. Ryan, Zoology, Chemistry, and Experimental Physics; J. Twohig, Chemistry and Zoology; W. Waugh, Botany; and S. Woods, Botany, Zoology, Chemistry, and Experimental Physics.

The following have passed the degrees of M.B., B.Ch., B.A.O., in the above-mentioned examination:—

Upper Pass.—William J. Dargan, *John Dundon, Geo. J. Johnston, Purcell N. Lalor, Wm. J. Niblock, T. J. O'Meara, and *Robert Watt. (Candidates marked with an asterisk may present themselves for the further examination for honours.)

Pass.—David Barry, Alfred G. Caldwell, Denny R. Cantillion, John G. Clokeg, James Cunningham, Emily E. Eberle, Jane S. Gallettly, James Graham, Edith B. Jöel, Thomas D. Luke, Sydney H. R. Montgomery, Jeremiah O'Callaghan, David O'Donnell, Maurice Sisk, and John R. Thompson.

SCHOLARSHIPS AT THE LONDON MEDICAL SCHOOLS.

The following entrance scholarships have been awarded in the St. George's Hospital Medical School: A scholarship of £145, in Arts, open to sons of medical men only, to Mr. Thomas Miller Neatby, late of St. John's College, Cambridge; scholarships of £85, open to Oxford and Cambridge men only, to Mr. George Trustram Watson, of St. Peter's College, Cambridge, and Mr. John Lamplugh Kirk, of Christ's College, Cambridge. At Westminster Hospital Medical School the entrance scholarships have been awarded as follows: The Guthrie scholarship for Classics, value £60, to Mr. Gilbert Edgar Cope; the Rutherford Alcock scholarship, also for Classics, value £40, to Mr. Stanley Dodd; and the scholarship in Human Anatomy and Physiology, open to students of Oxford and Cambridge only, value £40, to Mr. Frank Raymond King, Selwyn College, Cambridge.

CROYDON GENERAL HOSPITAL: THE NEW WING.

On Saturday last the Archbishop of Canterbury performed the ceremony of opening the new wing of the Croydon General Hospital. His Grace, in declaring the wing open, remarked that an Archbishop could not be engaged in a more Christian task than in the opening services of a hospital. He referred to the energetic interest taken in the founding and building of new hospitals by the working classes, and in this connexion said he was never more touched than he had been by an incident which occurred at the recent opening of the Poplar Hospital. The committee at Poplar were so grateful to the working men for their practical services that they gave them the best places at the door of the hospital, where they could see the Prince and Princess of Wales and the members of the Royal family when they arrived; and the working men answered them by letting their seats and standing in the mud so as to hand over the receipts to the hospital. Mr. Baddeley, the chairman of the hospital committee, stated that during the last year 11,000 persons had received medical aid from the charity, proving that it was doing good and needed work. The new wing comprises two wards, each containing twenty beds, as well as additional accommodation for the medical staff and servants of the hospital, and has been erected at a cost of about £8000.

THE WORTHING EPIDEMIC.

—The financial year of the Worthing Corporation from March 25th, 1893, to the same date in 1894 covers the whole period of the enteric fever epidemic, and some of the items of extraordinary expense on that account may be quoted from the balance-sheet just issued. New works on account of water-supply include £216 0*s.* 2*d.*, which was expended in driving the tunnel at the old well which was the source of all the trouble; £80 14*s.* 1*d.*, which was spent in vainly endeavouring by means of divers to stop the supply of water thus obtained; and in addition £3078 8*s.*, which was the cost of obtaining an entirely new supply from Broadwater. Of this last total the cost of new mains was the largest item, £1483 3*s.* 8*d.*, having been paid under this head. Sewerage expenses include £696 7*s.* 6*d.* paid in wages, a sum very largely increased on account of the necessity of frequent flushings; and the flushings themselves are stated to have cost £178 13*s.* 8*d.* Disinfectants for sewers cost £6 5*s.* "Sanitary charges" reach the respectable total of £736 16*s.* 5*d.*, which includes £246 3*s.* for medical certificates and analysts' fees and £449 1*s.* 7*d.* for the disinfectant distributed at first to the inhabitants. The total cost of the hospitals was £5152 1*s.* 9*d.*, the chief items being: rents, £493 2*s.* 4*d.*; medical officers and professional assistance, £581; staff and nurses, £1466 3*s.* 9*d.*; board of patients, staff, and nurses, £1339 18*s.* 2*d.*; drugs and appliances, £190 19*s.* 6*d.*; tents, furniture, &c., £345 10*s.* 9*d.*; laundry, £162 2*s.* 8*d.*; conveyances, £298 9*s.* 7*d.*; and stimulants, £138 8*s.* 2*d.* The sum of £66 15*s.* was paid on account of assistant sanitary inspectors. It may be added that the water-rate this year has been increased slightly to meet the cost of the temporary water-supply, which is very heavy.

THE MOXON MEDAL OF THE ROYAL COLLEGE OF PHYSICIANS.—We announced in our issue of July 28th that the Moxon Medal of the Royal College of Physicians would be awarded for distinguished services in clinical medicine to Sir William Jenner. The award was made on Thursday last after the delivery of the Harveian Oration at the College, and was accompanied by a few graceful and appreciative words from the President. The Registrar received the medal in the absence of its distinguished recipient.

PRESENTATIONS TO MEDICAL MEN.—On Saturday, the 13th inst., Dr. E. E. Waters, the late resident medical officer of the Fir Vale Workhouse, was presented with a handsome travelling clock and a reading lamp, the former by the officers of the institution and the latter by some of the nurses.—Dr. Herbert W. Nix was recently presented by some of the members of the male staff of the St. Marylebone Infirmary with a handsome silver cigar case, suitably engraved, on the occasion of his resigning the appointment of first assistant medical officer.—Dr. H. J. Neilson of Bulwell, Nottingham, was presented on Oct. 17th with a gold pencil-case by the ladies of the Bulwell Ambulance Class, in recognition of his voluntary services as their instructor.

TORQUAY MEDICAL SOCIETY.—The annual meeting of this society was held at the Torbay Hospital on Oct. 3rd, and the following gentlemen were elected to take office during the current year:—President, Dr. Thomas Finch; Vice-President, Mr. P. H. Gardner; Hon. Sec., Mr. G. Young Eales (re-elected); Hon. Librarians, Mr. A. E. Watson and Dr. Wrinch; Hon. Auditors, Dr. Humphreys and Mr. G. Todd; Council: Drs. Pollard and Stabb, Messrs. Odell and Thistle. A special meeting was held on Oct. 5th, Dr. Thomas Finch (the president) in the chair, to hear an address by Dr. R. Douglas Powell on "A Right Perspective in Medical Thought and Practice," which we publish in full in this issue. The meeting was well attended, the audience including many members of the profession from Exeter, Plymouth, and the neighbouring town of Torquay, to whom invitations had been sent. The annual dinner of the society, which was largely attended, was held the same evening at the Torbay Hotel, the president in the chair.

YORK MEDICAL SOCIETY.—The opening meeting of the sixty-fourth session of the York Medical Society was held in the Museum of the Yorkshire Philosophical Society on Wednesday, Oct. 10th, Mr. Draper of York, President for the year, being in the chair. A numerously attended meeting, comprising in addition to the members many non-professional visitors, was addressed by Sir James Crichton Browne on the subject of "Emotional Expression." The address was most able and interesting and was admirably illustrated by a large selection of lantern slides. A cordial vote of thanks to Sir J. Crichton Browne was moved by Dr. Rabagliati of Bradford, seconded by Dr. Buchanan of Thirsk, and supported by the Very Reverend the Dean of York. A banquet was held the same evening in the De Grey Rooms, when upwards of seventy were present, amongst the guests being the Lord Mayor of York, the two City Members, Mr. J. G. Butcher and Mr. Frank Lockwood, Q.C., Sir J. Crichton Browne and many others. The society, we learn, is in a flourishing condition, numbers eighty-five members, and possesses a library of 3400 volumes.

CONTINENTAL TRAVELLING.—In view of the approaching season for visitors to the South of France and health resorts on the coast of the Mediterranean, the South-Eastern Railway Company announce that they have completed with the North of France Railway Company, the Paris, Lyons, and Mediterranean Railway Company, and the International Sleeping Car Company the necessary arrangements for resumption of the special services, as last year. The Mediterranean express on Tuesdays and Saturdays will be resumed, beginning on Nov. 6th, leaving Charing-cross 10 A.M. and Cannon-street 10.5 A.M., *viâ* Folkestone and Boulogne, and 8 A.M. *viâ* Dover and Calais. A *coupé-lit* toilette, sleeping, and lavatory carriage and an ordinary first-class carriage now run through from Boulogne to the Riviera stations without change in connexion with the 10 A.M. train from Charing-cross; and similar carriages will run from Calais to the Riviera stations in connexion with the 8 A.M. train from Charing-cross, beginning on Nov. 3rd. The latter will be in connexion with the 11 A.M. train from Charing-cross. The arrangements include an alteration which will be appreciated by passengers from Paris to London *viâ* Boulogne and Folkestone, as the train now leaving at 10.20 A.M. will leave ten minutes later—viz., at 10.30 A.M., beginning on Oct. 20th, an advantage which in winter is considerable.

FREEMASONRY.—The installation meeting of the Æsculapius Lodge was held at the Café Royal, Regent-street, on Wednesday, the 10th inst. There was a large gathering of members and distinguished visitors present to witness the ceremony, among the latter being the Rev. R. J. Simpson, M.A., P.G Chap., Ralph Gooding, M.D., P.G.D., and Dr. Lott, P.G.Org. Jacob Pickett, M.D., was installed as Master for the ensuing year, and the following officers were appointed for the year—viz., J. Brindley James (acting) I.P.M.; G. Crawford Thomson, M.D., S.W.; Anthony Nutt, J.W.; G. Danford Thomas, M.D., treasurer; Thomas Dutton, M.D., P.M., secretary; Frank Oldfield, P.M., S.D.; H. Ezard, M.D., D.Sc., J.D.; Henry Kiallmark, P.M., I.G. The auditors—C. Luxmore Drew, M.B., Barrister-at-Law, and W. Arbuthnot Lane, M.S., F.R.C.S.—brought up the statement of accounts, which showed a large balance in the hands of the treasurer, £20 out of which were voted to Masonic charity. After the business of the Lodge had been transacted the brethren dined together.

FOOTBALL FATALITIES AND CASUALTIES.—On Oct. 3rd, at Kingswinford, Staffordshire, an inquest was held on the body of Frank Griffiths, a member of the Kingswinford Albion Football Club, who died on the 1st inst. from internal injuries consequent upon a kick in the abdomen.—At Dover, in a match between that town and Maidstone on the 13th inst., the captain of the latter team came into contact with a goal post and fractured his clavicle.—Whilst playing for his school on the same date against Hesketh Park, J. T. Smith, aged twenty-eight, an assistant master at Bickerton House, Birkdale, Southport, received a blow in the abdomen from the knee of an opponent. The accident was not deemed serious at the time, and medical aid was not sought until after the lapse of an hour and a half. He died on the morning of the 15th from peritonitis.—The following accidents also occurred on Saturday, Oct. 13th. In a match between Sutton and Keighley Trinity, W. H. Hardacre, one of the Sutton home forwards, sustained a fracture of the clavicle.—During a match between Burnley and Darwen, played at the latter town, a player was seriously injured in a scrimmage, but the real nature of his injuries has not transpired.—A youth aged eighteen fractured his right patella whilst playing in a match between All Hallows and the University Extension team at Clapton.—Mr. Hanson, headmaster of Appeldurcombe College, sustained a compound fracture of the right leg in a football match at Ventnor.—Robert Hall, the member of the Preston North End Reserve who recently sustained a compound fracture of the lower part of the fore-arm in a match at Blackburn, died on the 13th inst. from tetanus supervening on the resetting of the fracture.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BRACEY, W. E., L.R.C.S., L.R.C.P.Edin., has been appointed Assistant House Surgeon to the Birmingham General Hospital.

COLLIER, J. H., M.B., C.M.Aber., L.R.C.P., L.R.C.S., L.M.Edin., L.F.P., and S.G., &c., has been appointed Resident Medical Officer to the Sheffield Union Hospitals.

CROSBY, H. M., M.B., C.M.Edin., has been appointed Assistant House Surgeon to the Birmingham General Hospital.

FISH, C. E., B.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., has been appointed House Physician to the City of London Hospital for Diseases of the Chest.

GREEN, C. A. L., F.R.C.S.Eng., M.D.Heid., has been appointed Resident Surgical Officer to the Birmingham General Hospital.

HICKS, T. W., M.R.C.S., L.R.C.P., has been appointed Medical Officer of the Sixth District of the Barnet Union.

JONES, BENJAMIN EVANS, L.R.C.P. & S.Edin., &c., has been re-appointed Lecturer on Ambulance and Sick Nursing to the Fylde Rural Districts Technical Committee.

MEAKIN, HAROLD B., M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to the Metropolitan Hospital, Kingsland-road, vice W. E. Miles, resigned.

METCALFE, G. E. G., L.R.C.S., L.R.C.P., L.F.P.S.Glasg., L.M., has been appointed Medical Officer to the Capel Isolation Hospital, vice W. Malden, resigned.

ROSE, JOHN, M.A., M.B., M.D., L.R.C.S.Edin., retired Staff-Surgeon, Royal Navy, has been appointed Honorary Consulting Surgeon and Member of the Board of Management of the Chesterfield and North Derbyshire Hospital.

STEED, JOHN, M.B., C.M.Edin., has been appointed House Physician to the Birmingham General Hospital.

VINTRAS, LOUIS, M.B., M.R.C.S., L.R.C.P., has been appointed Physician to the French Hospital, vice Armand Ruffer.

WATERS, HARRY G., L.R.C.P.Lond., M.R.C.S.Eng., has been appointed Assistant House Surgeon to the Hull Royal Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASTON UNION.—Resident Assistant Medical Officer. Salary £100 per annum, with furnished apartments, rations, washing, &c.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £70, with board, residence, and washing.

BOSCOMBE HOSPITAL, Bournemouth.—House Surgeon. Salary £60, with board and residence.

CARNARVONSHIRE AND ANGLESEY INFIRMARY AND DISPENSARY, Bangor.—House Surgeon. Salary £70 per annum, with board and lodging in the house.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Assistant Surgeons.

CHARING-CROSS HOSPITAL.—Surgical Registrar. Salary £40 per annum.

FARRINGDON GENERAL DISPENSARY, Holborn.—Honorary Physician.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon. No salary, but residence, board, and washing provided.

HALIFAX INFIRMARY.—House Surgeon. Salary £80 per annum, advancing £10 per year up to £100, with residence, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Surgical Registrar and Anæsthetist. The appointment is made for one year, an honorarium of £40 being voted at the expiration of that term.

HOSPITAL FOR WOMEN, Brighton.—House Surgeon. Salary £80 per annum, with board and rooms.

HULME DISPENSARY, Manchester.—Honorary Surgeon.

LONDON TEMPERANCE HOSPITAL, N.W.—Assistant Resident Medical Officer for six months. No salary, but board, washing, and residence in the Hospital are provided and a honorarium of 5 guineas.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT.—Resident Medical Officer. Salary £60 per annum, with board, apartments, and washing.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at both the South-Western and Fountain Hospitals for Fever Patients, situated in Landor-road, Stockwell, S.W., and Tooting-grove, S.W., respectively. Salary £15 per month, with board, lodging, attendance, and washing in each case.

NORTH-EASTERN HOSPITAL FOR CHILDREN, N.E.—Physician.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer. Salary of £50 attaches to the senior post.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Assistant Physician.

SMEDLEY'S HYDROPATHIC ESTABLISHMENT, Matlock.—House Physician. The appointment is for six months. Honorarium of £40, with board, lodging, &c.

STOURBRIDGE DISPENSARY.—House Surgeon and Secretary. Salary £120 a year, with furnished rooms, coal and gas, with an extra allowance of £25 for travelling expenses.

SUNDERLAND INFIRMARY.—Honorary Physician.

UNIVERSITY COLLEGE, London.—Surgical Registrar.

Births, Marriages, and Deaths.

BIRTHS.

CALDECOTT.—On Oct. 9th, at Bracknell, Berks, the wife of Charles Caldecott, M.B., B.S.Lond., M.R.C.S., of a son.

CRAWFORD.—On Oct. 14th, at Mount Pleasant, Liverpool, the wife of W. S. Crawford, F.R.C.S.Edin., of a son.

HAMER.—On Oct. 14th, at Dartmouth-park-hill, London, the wife of W. Heaton Hamer, M.D., of a daughter.

JAMES.—On Oct 9th, at Odiham, Hants, the wife of J. Angell James, M.R.C.S., L.R.C.P.Lond., of a daughter.

MARRIAGES.

BARRETT—ACKLAND.—On Oct. 13th at Christ Church, Clifton, Bristol by the Rev. T. C. Chapman, M.A., vicar, Walter Russell Barrett L.R.C.P. Lond., M.R.C.S. Eng., of 6, Chandos-street, Cavendish square, W., to Lucy Mary, elder daughter of Mrs. Craig Ackland, of 5, Rodney-place, Clifton.

DEBENHAM—DEBENHAM.—On Oct. 9th, at St. Andrew's, Presteigne, Horace Allan Debenham, M.R.C.S., L.R.C.P., of Warden Court, to Maude Constance, youngest daughter of H. K. Debenham, M.R.C.S., L.S.A., of Presteigne.

SMITH—FOSDICK.—On Oct. 9th, at Sproughton Church, Percy Montague Smith, L.S.A. Lond., M.R.C.S. Eng., to Eleanor Ann, only daughter of Frederick H. Fosdick, of Sproughton, Ipswich.

DEATHS.

EUSTACE.—On Oct. 9th, at the residence of his father, Elmhurst Glasnevin, John Neilson Eustace, B.A., M.B., B.S., Trinity College Dublin.

HICKS.—On Oct. 13th, at Brock-street, Bath, Charles Cyril Hicks, M.D., M.R.C.S., of Wokingham, Berks, and formerly of Dunstable, Bedfordshire, aged 62.

MCLARTY.—On Oct. 9th, at Norton House, Camden-road, London, Duncan McLarty, M.D., in his 58th year.

THOMPSON.—On Sept. 3rd, at Adelaide, the result of a carriage accident, Charles Emilius Thompson, M.R.C.S.E., of Delamere, Broken Hill, N.S.W.

WILKINSON.—On Oct. 6th, at Cropthorn Vicarage, Pershore, the residence of his son, after a long and trying illness, Frederick Eachus Wilkinson, M.D., late of Sydenham, aged 75.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 18th, 1894.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp Shade	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Oct. 12	30·30	S.E.	55	54	71	60	55	...	Overcast.
,, 13	30·25	W.	49	49	79	63	48	...	Foggy
,, 14	30·02	N.E.	51	49	85	56	49	0·01	Cloudy
,, 15	30·08	N.	44	42	89	53	40	...	Bright
,, 16	30·13	N.	47	45	70	53	42	0·05	Raining
,, 17	30·12	N.W.	40	39	58	52	37	...	Foggy
,, 18	29·80	W.	47	45	54	49	40	...	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Gt. Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Marmaduke Sheild: Ulcerations of the Duodenum, with an account of two cases in which Laparotomy was performed.—Mr. C. B. Lockwood: Additional cases of Perforative Ulcer of the Duodenum.—Mr. Harrison Cripps: Intestinal Anastomosis.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Mr. C. B. Lockwood: The Surgical Treatment of Diffuse Septic Peritonitis, with successful cases.

WEDNESDAY.—HUNTERIAN SOCIETY.—8.30 P.M. Dr. Fred. J. Smith: The Treatment of Chorea, with especial reference to the Hypodermic use of Arsenic.—Dr. Arnold Chaplin: The Treatment of Fœtid Expectoration by a New Method.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Hector Mackenzie and Mr. F. C. Abbott: A case of Subdiaphragmatic Abscess communicating with the Right Pleura successfully treated by Resection of Rib and Drainage.—Dr. R. J. Colenso (introduced by Sir Dyce Duckworth): A case of Poisoning by One Ounce of Chloral Hydrate; Recovery.—Dr. T. Churton: A case of Multiple Neuritis fatal on the fifth day.—Mr. Golding-Bird: A case of Pulsatile Congenital Cyst simulating Aneurysm.—Dr. Herringham and Mr. Bruce Clarke: A case of Idiopathic Dilatation of the Sigmoid Flexure.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. R. M. Gunn: Clinical Examination of the Eye.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. C. Wilkin: Nasal Polypi.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank and Dr. Hewlett: Anthrax and Malignant Œdema.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Hyslop: Delusional Insanity; Paranoia.

WEDNESDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton, 4 P.M., Dr. S. Martin: Cases of Pleurisy.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Myopia.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—Dr. Morgan Dockrell: Syphilis.

WEST LONDON HOSPITAL (Hammersmith-road, W.).—5 P.M. Dr. Abraham: Cases of Skin Disease. (Post-graduate Lecture.)

LONDON SKIN HOSPITAL.—8 P.M. Dr. Sanctuary: Eczema, its Causes and Treatment.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. W. Arbuthnot Lane: Clinical Surgical Lecture.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Buzzard: Cases in the Hospital.—Central London Sick Asylum, Cleveland-street, W., 5.30 P.M., Dr. Ord: Cases in the Wards.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Routh: Gynæcological. (Post-graduate Course.)

FRIDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton, 4 P.M., Dr. S. Martin: Cases of Asthma.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Craig: Stupor; Catalepsy; Katatonia; Dementia.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—Dr. Morgan Dockrell: Eczema.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

"HOLIDAY AMENITIES."

WE have received letters from both parties in this controversy and the entire correspondence. We are only confirmed in the opinion we expressed last week. It is always right, of course, to send the whole of a controversial correspondence, but we see no reason to doubt that the practitioner who sent it in the first instance had no intention of withholding any essential part of it, and that in withholding it he had consideration only for our time. The primary error was in writing to instead of seeing the practitioner whose action was complained of. A friendly call and chat would save many misunderstandings which are only intensified by letters, as in this case. We repeat our remark that there is nothing in these cases which should estrange two medical neighbours who have hitherto been friends. Both parties wish to do what is right, and we have no doubt that when next holiday season comes round, and the temperature of their correspondence has come down to normal, they will do what is not only right but friendly.

Mr. Henry F. D. Gisborne.—We are unable to answer our correspondent. The success depends upon so many different factors that a general average, even if it could be given, would be meaningless.

BOGUS APPOINTMENTS.

To the Editors of THE LANCET.

SIRS,—I wish to warn my professional brethren in this neighbourhood against a short, dark woman of middle age, dressed as a nurse in black, who called on me to-day and asked me to see a patient in a neighbouring street. On going there I found no such person and learnt that another surgeon had called on a similar fruitless errand.

I am, Sirs, yours obediently,

Cavendish-square, W., Oct. 16th, 1894. CHIRURGUS.

FILTHY QUACKERY.

J.P. would do a great public service by sending the book to which he refers to the Public Prosecutor. In his double capacity as justice of the peace and general practitioner he could do this with effect. It is contrary to public morals that the post should be used as a medium for distributing such tracts. Could not our correspondent do something in his own district through the police in such matters?

Pecua.—The subject is incidentally noticed in our answers to several correspondents. The General Medical Council has no jurisdiction over persons outside the profession.

THE WOMEN'S FREE HOSPITAL, SOUTHAMPTON.

THE full title of this somewhat remarkable institution is "The Women's Free Hospital for Special Diseases." The report for 1893 shows a subscription list of £22 4*s.* 6*d.* By the aid of other items—amongst which are "Collecting-box, 10*s.*," and "Bazaar proceeds, £132 12*s.* 3*d.*"—the income is brought up to £188 6*s.* 10*d.* There is only one medical officer, though in his difficulties he is assisted, according to the report, by Mr. Lawson Tait. It seems a most economically conducted hospital; for, even with so small an income and some very responsible cases, as we shall presently see, there is a balance of £3 7*s.* 9*d.* in the hands of the treasurer. The medical report is signed only by the medical officer, Mr. Eliot, who allows the use of two rooms in a house in which he treats his own private cases for the reception of hospital patients. The out-patients are treated in another house. The class of diseases in in-patients most treated is of the grave and highly special order thought to require abdominal section. No less than twenty-four such sections have been performed in the last twelve months, and not fewer than four of the patients have died. This is a heavy responsibility to lay on one man at Southampton whose consulting colleague lives at Birmingham. If our recent suggestions for guarding the reputation of surgery in hospital practice are well founded, especially where grave mutilations are practised involving not only loss of function but risks to life, such a hospital as this, without a working staff and without beds save those rented from its single medical officer, must be considered unsatisfactory. It is only fair to say that on the title-page Dr. Playfair is given as the consulting physician, and Mr. Lawson Tait as the consulting surgeon. It does not, however, appear that Dr. Playfair takes any active part in the work, and, living in London, his name would seem to be purely ornamental. It is a new departure in hospitals to have their most important officers living at remote distances from the spot at which their services are likely to be required, and one which is open to very serious objections. It is the less defensible in a town already supplied with one or two hospitals.

"THE MAGICIAN DOCTOR" AT MALVERN.

MR. WALTER TYRRELL, M.R.C.S., has the misfortune to be the subject of a notice in the paper *To-Day* of Sept. 8th, 1894. This notice is meant to be highly flattering, and to carry the fame of Malvern and Mr. Tyrrell far above that of all other rival remedies for rheumatism and gout. We are told that Mr. Tyrrell divides his time between London and Malvern, and that his remedies are very simple: "A dose of 'nux' the size of a millet seed, and, secondly, 'a pack.'" By a strange coincidence the number of the paper which contains this literary gem of medical criticism, extending over two columns, contains the advertisement of Mr. Tyrrell's book on "Nervous Exhaustion: its Causes, Outcome, and Treatment." We leave our readers to judge for themselves of the value of such newspaper articles. But it is abundantly evident that journalistic puffs of medical men are on the increase, to the great injury of the profession, and any medical man who wishes to stand well with his brethren should hasten to disclaim any knowledge of or responsibility for such methods.

THE MANCHESTER EYE AND EAR HOSPITAL.—THE COMBINATION OF A HOSPITAL AND A PRACTITIONER'S PRIVATE ADDRESS.

THE following advertisement suggests some curious developments. According to the Medical Register, Dr. McKeown's private address is 25, Manchester-street, which, it will be seen, is also according to the advertisement: "The Manchester Eye and Ear Hospital," with a committee, honorary secretary, &c., and an honorary surgeon, who is "David McKeown, M.A., M.D., M.Ch." We need not remind Dr McKeown that the tradition of the profession does not allow the advertisement of private addresses, and that a hospital is scarcely intelligible to the English public which has only one surgeon.

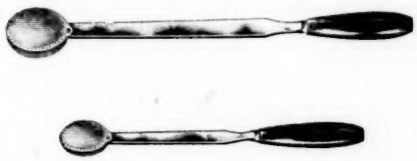
> "Manchester Eye and Ear Hospital, 25, St. John-street. Committee: Mr. Alderman Bowes; Messrs. Charles J. Hurst, J. T. Lingard, John Lomas, J. D. Sutcliffe, and G. H. Winterbottom. Hon. Surgeon: David McKeown, M.A., M.D., M.Ch. Patients Admitted on Monday, Wednesday, and Friday Mornings, from 9 to 11 o'clock, and on Tuesday and Thursday Evenings, from 6 to 7.30. No Recommend is Needed.—J. G. SKEMP, M.A., Hon. Sec."

THE STANLEY HOSPITAL.

THE Medical Board of this hospital have investigated a charge against the house surgeon of neglecting a child brought to the hospital badly burnt. The evidence showed that the house surgeon was at the moment engaged in an operation, but that he attended with the least possible delay to the child. The Board unanimously agreed that there was no ground for the charge against the house surgeon. The conclusions of the Board were adopted by the committee of the hospital. Such a charge should never have been brought. A surgeon cannot do two operations at one time.

A PERCUTEUR.

WE have had brought under our notice a form of percuteur, of which the most accurate description we can give is to say that it is precisely a painter's palette knife with a leather pad at the end of it. It is the design of Mr. Fisher of Matlock, and is made in several sizes and of varying flexibility, the quality being, of course, dependent on the length of the thin blade and the size and weight of the pad. The



self-administration of *tapotement*, for which purpose the instrument has been constructed, is, we know, recommended in certain cases of local nerve failure; but the records of actual benefit derived from the treatment are scanty.

M.R.C.S.—Cocaine has been used with more or less success in cases of circumcision. If the penis is tightly tied at its root and a series of punctures made around the attachment of the prepuce while the glands and reflected mucous membrane are instilled with the solution, little pain will be felt. A 5 per cent. solution may be used, but care must be taken that the patient does not absorb more than about half a grain or a grain. Even half a grain will in some persons produce unpleasant symptoms. Chloride of ethyl might be tried locally.

CONSULTATIONS WITH HOMŒOPATHS.

To the Editors of THE LANCET.

SIRS,—Recently I was asked to take charge of a boy and report my opinion to his late medical attendant. I found that the boy was being treated homœopathically. I declined to write to the homœopath, as I considered that correspondence concerning the case would be equivalent to a consultation, and refused to be a party to the administration of homœopathic medicines. For doing this I received an angry and indignant letter from the homœopath, who stated that not only did physicians frequently meet him, but called him into consultation with them. Was I right in refusing to correspond with a homœopath on a purely medical case? Are the codes of medical ethics worth the paper they are written on? I have recently heard of so many well-known physicians and surgeons consulting with homœopaths that I begin to think rules are only made to be broken.

I am, Sirs, yours faithfully,

Oct. 12th, 1894. F.R.C.S. ENG.

*** OUR correspondent's question is a natural, and not altogether an easy, one. We see that a distinction may be drawn in some cases between meeting a homœopath in consultation, which is useless and unsatisfactory, and reporting to him one's opinion, which might be a mere act of courtesy between two members of a profession equal in the eye of the law; and acts of courtesy cannot be too much multiplied. But we gather that our correspondent had grounds for thinking that the homœopath was interfering in the treatment and would use the report in this way and for this purpose. This is an indefensible position for any medical man who realises the difference between medical science and medical fads to place himself in, and the only course left to him is courteously to decline correspondence on what is, after all, a question of treatment.—ED. L.

SCHOOL OF ELECTRICITY AND MASSAGE.

THERE must, we presume, be lessons given in the use of massage. The application of electricity should be entrusted as much as possible to medical men. We notice the advertisement of a school of electricity for persons of both sexes by a member of the Royal College of Physicians. Pupils, when properly qualified, will be granted a certificate of proficiency. The multiplication of qualifications and certificates is alarming. The advertisement of such a school in a circular meant for very general distribution in classes likely to supply pupils is open to question.

M.B., C.M.—The following books are recommended to our correspondent:—"Ambulance Lectures—First Aid to the Injured," by Samuel Osborn, F.R.C.S. (H. K. Lewis, Gower-street, London, W.C.). Dr. E. J. Lawless has just published a work of similar scope, entitled "First Aid to the Injured and Management of the Sick." (Young J. Pentland, Edinburgh and London, 1894).

M.R.C.S. Eng. &c.—A medical officer is entitled to such a fee. The sharing of it with his assistant must be a matter of private arrangement.

PRACTICE BY HANDBILLS.

THE following handbill has come into our hands:—

"19, Colebrook-row, Islington, N.

"Doctor McMullan, General Medical Practitioner, now resides at the above address, and may be consulted daily. Surgery Hours: Morning, 9 till 11; Afternoon, 2 till 4; Evening, 9 till 10. Sundays: Morning, 11 till 1. Branch Dispensary and Surgery at 236, Goswell-road. Hours of Attendance: Morning, 11 till 1; Evening, 6 till 9. Sundays: Evening, 6 till 9. Caretaker resides on Goswell-road premises, and Messages left with him will be promptly attended to by me, at any hour, night or day. Urgent cases attended at once. Specialities—Midwifery, Diseases of Women and Children. Terms within reach of all Classes."

Brux. M.D.—We think he can. He is registered independently of his M.D. It is better to state the source of the M.D. as a matter of candour; but it is not obligatory where the legal status of the practitioner is otherwise assured.

PROVIDENT DISPENSARY, TUNBRIDGE WELLS.

THE bill sent us verges on the objectionable. It does not do justice to the advantages of the working man having his own family attendant, which is far the best arrangement. All medical men are reasonable in their charges to honest working men, and are glad to have them as patients. We notice no mention of a wage-limit in the conditions of membership of the dispensary. We are informed, too, that copies of the bill, with the names of six medical men constituting the staff, are supplied to the agents of the Prudential Insurance Company, with instructions to push the dispensary. We think this is not a legitimate way of working a provident dispensary.

Mr. T. Messenger.—It is the right of a registered medical man to commence practice in any part of Her Majesty's dominions. The methods of obtaining practice are a matter of taste and of professional ethics. It would be right to apply for clubs, in ordinary circumstances, which have a medical office

UNIVERSITIES AND UNWORTHY CONDUCT IN THEIR GRADUATES.

THE fact is often alluded to that the Universities have no disciplinary power over their graduates, no power of disowning them or taking them off the lists of the University, however much they may have discredited their profession or their *alma mater*. This is a curious fact. But there is one still more so—that the Universities have shown no desire to acquire such powers. The Medical Defence Union has directed attention to this unsatisfactory state of affairs. We may hope that public opinion will insist one day on the Universities having the power of discipline which the corporations possess.

CHARLES B. HOUGHTON, HUDDERSFIELD.

THIS gentleman, under the name of "Dr. Houghton," issues a large red bill, holding himself out for consultation for all disorders of the head, chest, liver, lungs, or any imaginable viscus or cavity. A correspondent asks if anything can be done. The bill might be forwarded to any medical authority having Mr. Houghton among its diplomates, But has any medical authority such a responsibility? We do not gather so from the Medical Register.

THE MOST POPULAR LOCAL DOCTOR.—COTTAGE HOSPITAL BAZAAR, WOOD GREEN.

WE agree with our correspondent that the handbill is not a credit to its authors. Ladies must show more care in their devices for making money even for good objects, or bazaars will be avoided by people of taste.

CANCER CURERS.

Mr. Wm. Wilson, F.R.C.P. Edin., is thanked for his letter, though it is too long for insertion. He did quite right in declining to attend under the circumstances. We may hope that some day cancer quacks will be dealt with penally; but the time is not yet.

DR. A. P——, SURGEON.

SUCH large signs are not in good taste. Can no friend be found in the profession to give the gentleman a hint as to an amendment of his methods?

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Worcester Daily Times, Yorkshire Post, Bristol Mercury, Liverpool Daily Post, Temperance Chronicle, The Vegetarian, The Morning, City Press, Sanitary Record, Reading Mercury, Hertfordshire Mercury, Local Government Chronicle, The Schoolmaster, Weekly Free Press and Aberdeen Herald, West Middlesex Standard, Chemical News, Sharland's Trade Journal, Windsor and Eton Express, Times of India, Pioneer Mail, Surrey Advertiser, Middlesex Advertiser, Law Journal, Sunday Times, Chemist and Druggist, Local Government Journal, Glasgow Herald, Winter's Weekly, North British Daily Mail, The Philanthropist, Tit Bits, Leicester Daily Post, Birmingham Daily Post, Leeds Mercury, &c. &c.*

Communications, Letters &c. have been received from—

A.—Dr. F. P. Atkinson, Surbiton; Mr. F. W. Alexander, London; Mr. W. Anderson, London; M. Felix Alcan, Paris; American Electric Heating Corporation, Boston, U.S.A., Secretary of; Æsculap Bitter Water Co., London; Anti-tuberculosis Association, Cleveland, U.S.A., Secretary of; Aston Union, Clerk of; Amicus, Devizes; A. J. B., London.

B.—Dr. T. Lauder Brunton, London; Dr. R. Beveridge, Leith; Dr. A. G. Bateman, London; Dr. J. B. Brierley, Old Trafford; Mr. Thomas Bryant, London; Mr. W. C. Bosanquet, London; Mr. G. A. Brown, Tredegar; Mr. W. J. Barkas, Sydney; Mr. J. F. Bullar, Southampton; Mr. L. A. Bidwell, London; Mr. Lennox Browne, London; Mr. T. B. Browne, London; Mr. J. N. Bredin, Maidstone; Mr. A. H. Burns, Margate; Mr. Blackett, London; Messrs. C. A. Bond and Co., London; Messrs. A. and C. Black, London; Messrs. Bathgate and Burns, Edinburgh; Messrs. Burroughs, Wellcome, and Co., London; Messrs. Blondeau et Cie., London; Birmingham General Hospital, House Governor of; Brighton Hospital for Women, Secretary of; Boscombe Hospital, Bournemouth, Secretary of; Brin's Oxygen Co., London; Bradford Children's Hospital, Secretary of; B. G., London; Brux M.D.

C.—Dr. T. Carr, Braintree; Dr. S. Cartwright-Reed, Herschel, Cape Colony; Dr. H. E. L. Canney, London; Dr. G. Carré, London; Dr. R. T. Cooper, London; Dr. C. R. Chalmers, Glasgow; Mr. W. Candlish, Patna, N.B.; Messrs. J. and A. Churchill, London; Messrs. D. Currie and Co., London; Catholic University, Belfast, Rector of.

D.—Dr. T. Dutton, London; Mr. T. Dixon, London; D. P. H., London.

E.—Mr. T. W. N. Elvin, East Dereham; E. D., Skegness.

F.—Dr. G. E. Fuller, Market Drayton; Dr. W. J. Fleming, Glasgow; Dr. G. Fowler, Kinton, N.B.; Dr. A. Foxwell, Birmingham; Mr. T. W. Fagg, Brussels; First Swiss Alpine Milk Exporting Co., Ltd., London.

G.—Dr. W. T. Gairdner, Glasgow; Dr. W. R. Gowers, London; Mr. A. M. Gray, Devizes; Mr. B. C. Gowan, Watford; Mr. W. Gibbin, jun., London; Gilchrist Institution for Trained Nurses, London.

H.—Dr. G. Herschel, London; Dr. W. S. Hedley, Brighton; Surg.-Capt. H. Herbert, Rajkote, India; Mr. J. Halcrow, London; Mr. J. Heywood, Manchester; Mr. T. D. Hancock, Nottingham; Mr. J. J. Harding, Ballincollig; Mr. F. A. Heslop, Blackpool; Mr. A. E. B. Hine, s.s. *Pekin*; Mr. C. T. W. Hirsch, Rewa; Messrs. Hasenstein and Vogler, Geneva; Hulme Dispensary, Manchester, Hon. Secretary of; Hastings, Town Clerk of.

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